THE 55-MPH SPEED LIMIT

HEARING

BEFORE THE
SUBCOMMITTEE ON TRANSPORTATION,
AVIATION AND MATERIALS
OF THE
COMMITTEE ON
SCIENCE AND TECHNOLOGY
U.S. HOUSE OF REPRESENTATIVES
NINETY-NINTH CONGRESS
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THE 55-MILE-PER-HOUR SPEED LIMIT

THURSDAY, FEBRUARY 21, 1985

House of Representatives,
Committee on Science and Technology,
Subcommittee on Transportation,
Aviation and Materials,
Washington, DC.

The subcommittee met, pursuant to notice, at 9:05 a.m., in room 2325, Rayburn House Office Building, Hon. Dan Glickman (chairman of the subcommittee) presiding.

Present: Representatives Glickman, Reid, Nelson, Gordon, Lewis, Packard, and Boehlert.

Mr. **Glickman**. Why don't we go ahead and begin the hearing this morning. There are, I know, several members who are testifying, also a few members of the committee who are not here yet who wanted to testify, so we'll try to take those that are here first and then those that come later will be allowed to testify.

I have an opening statement, as does Tom Lewis. I would ask my colleagues to do their best to try to keep their statements as abbreviated as possible because we have a long day of testimony today, and your entire statements will appear as part of the record.

STATEMENT OF HON. DAN GLICKMAN, A MEMBER OF CONGRESS FROM THE STATE OF KANSAS AND CHAIRMAN, SUBCOMMITTEE ON TRANSPORTATION, AVIATION AND MATERIALS, COMMITTEE ON SCIENCE AND TECHNOLOGY

Mr. **Glickman**. Today the Subcommittee on Transportation, Aviation and Materials will consider the pros and cons of the 55-mile-per-hour national speed limit, and the safety and feasibility of allowing States to set their own speed limits, at least on nonurban, limited-access highways.

Late last year the National Research Council released their study on 10 years of experience with the 55-mile-per-hour speed limit, which recommended that the 55-mile-per-hour national speed limit be retained on "almost all roads." However, the study committee was divided over whether selected rural interstate highways should be exempted from this speed limit. These rural interstate highways have the highest average speeds in the system, yet the fatality rate on these highways is among the lowest.

Jurisdiction over the regulation and enforcement of speed limits has traditionally been a matter of State authority. However, the Federal Government took over this authority in 1974 and set up what was then called a "temporary" fuel conservation measure in response to the national threat posed by the Arab oil embargo.

Now that the pressure is at least temporarily off from the energy angles, the debate on the national speed limit has centered on safety concerns.

On philosophical grounds, I think Congress should return to the States the authority to set speed limits. However, my mind is open with respect to the research data on the relationship between speed limits and safety. If it can be demonstrated that raising the speed limit would pose a serious national threat to public safety, Congress should keep the 55-mile-per-hour speed limit. However, by the same logic, if it is shown that raising that speed limit—particularly on nonurban, limited access highways—would not result in any substantial threat to public safety, Congress should give the States the discretion to raise the speed limit if they so chose. This hearing is intended to get at these facts.

A number of my colleagues in the House as well as the Senate have introduced legislation taking various positions on this issue. I certainly welcome their interest in assisting the subcommittee in its work today. Likewise, I want to thank the expert witnesses who have agreed to appear today.

I would again point out that I think it is appropriate, after 10 years' experience with this, that we take a look at it. Some people have indicated to me, "Don't mess with it. It's working fine." Others have said the rationale for why it went in in the first place doesn't make any sense any more. I guess our point from the jurisdiction of this committee—we have jurisdiction over the research functions of transportation programs in this Government—is to try to determine what does the data really show, and are there some roads that the States ought to be handed back the responsibility for regulating speed limits?

Now I would like to call on my colleague, our ranking member, Tom Lewis from Florida, for any comments he may wish to make.

[The prepared opening statement of Mr. Glickman follows:]

OPENING STATEMENT

HONORABLE DAN GLICKMAN, CHAIRMAN
SUBCOMMITTEE ON TRANSPORTATION, AVIATION AND MATERIALS
COMMITTEE ON SCIENCE AND TECHNOLOGY
U. S. HOUSE OF REPRESENTATIVES

FEBRUARY 21, 1985

HEARING: 55-MPH SPEED LIMIT

TODAY THE SUBCOMMITTEE ON TRANSPORTATION, AVIATION AND MATERIALS WILL CONSIDER THE PROS AND CONS OF THE 55-MPH NATIONAL SPEED LIMIT, AND THE SAFETY AND FEASIBILITY OF ALLOWING STATES TO SET THEIR OWN SPEED LIMITS, AT LEAST ON NON-URBAN, LIMITED-ACCESS HIGHWAYS.

LATE LAST YEAR, THE NATIONAL RESEARCH COUNCIL RELEASED THEIR STUDY ON TEN YEARS OF EXPERIENCE WITH THE 55-MPH SPEED LIMIT, WHICH RECOMMENDED THAT THE 55-MPH NATIONAL SPEED LIMIT BE RETAINED ON "ALMOST ALL" ROADS. HOWEVER, THE STUDY COMMITTEE WAS DIVIDED OVER WHETHER SELECTED RURAL INTERSTATE HIGHWAYS SHOULD BE EXEMPTED FROM THE 55 MILE-PER-HOUR LIMIT. THESE RURAL INTERSTATE HIGHWAYS HAVE THE HIGHEST AVERAGE SPEEDS IN THE SYSTEM, YET THE FATALITY RATE ON THESE HIGHWAYS IS AMONG THE LOWEST.

JURISDICTION OVER THE REGULATION AND ENFORCEMENT OF SPEED LIMITS HAS TRADITIONALLY BEEN A MATTER OF STATE AUTHORITY. HOWEVER, THE FEDERAL GOVERNMENT TOOK OVER THIS AUTHORITY IN 1974 AND SET UP WHAT WAS THEN CALLED A "TEMPORARY" FUEL CONSERVATION MEASURE IN RESPONSE TO THE NATIONAL THREAT POSED BY THE ARAB OIL EMBARGO. NOW THAT THE PRESSURE IS AT LEAST TEMPORARILY OFF FROM THE ENERGY ANGLES, THE DEBATE ON THE NATIONAL SPEED LIMIT HAS CENTERED ON SAFETY CONCERNS.

ON PHILOSOPHICAL GROUNDS, I THINK CONGRESS SHOULD RETURN TO THE STATES THE AUTHORITY TO SET SPEED LIMITS. HOWEVER, MY MIND IS OPEN WITH RESPECT TO THE RESEARCH DATA ON THE RELATIONSHIP BETWEEN SPEED LIMITS AND SAFETY. IF IT CAN BE DEMONSTRATED THAT RAISING THE SPEED LIMIT WOULD POSE A SERIOUS NATIONAL THREAT TO PUBLIC SAFETY, CONGRESS SHOULD KEEP THE 55-MPH SPEED LIMIT. HOWEVER, BY THE SAME LOGIC, IF IT IS SHOWN THAT RAISING THE SPEED LIMIT ON NON-URBAN, LIMITED ACCESS HIGHWAYS WOULD NOT RESULT IN ANY SUBSTANTIAL THREAT TO PUBLIC SAFETY, CONGRESS SHOULD ALLOW STATES TO DO SO. THIS HEARING IS INTENDED TO GET AT THE FACTS.

A NUMBER OF MY COLLEAGUES IN THE HOUSE OF REPRESENTATIVES, AS WELL AS THE SENATE, HAVE INTRODUCED LEGISLATION TAKING VARIOUS POSITIONS ON THIS ISSUE. I CERTAINLY WELCOME THEIR INTEREST IN ASSISTING THE SUBCOMMITTEE IN ITS WORK TODAY. LIKEWISE, I WANT TO THANK THE EXPERT WITNESSES WHO HAVE AGREED TO APPEAR TODAY. I LOOK FORWARD TO A VERY PRODUCTIVE HEARING.

STATEMENT OF HON. TOM LEWIS, A MEMBER OF CONGRESS FROM THE STATE OF FLORIDA

Mr. Lewis. Thank you, Mr. Chairman.

The subject of this hearing has certainly generated a great deal of interest, as evidenced by the number of members wishing to share their views with us today. You are to be commended, Mr. Chairman, for holding this hearing.

When the 55-mile-per-hour speed limit was imposed in 1974, the rationale used was the need to conserve fuel. However, the result was trivial: less than 2 percent of highway fuel consumption, but with the accompanying unexpected drop in the number of fatalities, it is not surprising that safety soon became the primary argument for the "double nickel." We all support safety, but are we in fact getting the benefits that were being promised?

A number of doubters are now suggesting that the figures are misleading and the number of fatalities would have dropped without the lower speed limit. Who is right? We are spending about a billion extra hours on the road each year, and that's a high price to pay if we don't need it. I believe it's appropriate that we carefully examine the data that have been accumulated over the last decade and try to sort out fact from fiction. We have an impressive list of witnesses here today who should be able to help us do just that.

Thank you again, Mr. Chairman, for what promises to be a very interesting hearing.

Mr. Glickman. Thank you, Mr. Lewis.

Now I would like to call on our colleague Harry Reid from Nevada for any statement he may wish to make.

STATEMENT OF HON. HARRY REID, A MEMBER OF CONGRESS FROM THE STATE OF NEVADA

Mr. Reid. Thank you, Mr. Chairman.

The list of witnesses for today's hearings on the 55-mile-per-hour speed limit points, of course, to a broad diversity of opinion. While some firmly believe that the existing Federal regulations pertaining to highway speeds have served the interests of the country, others argue that the highway speed limit should be a matter of absolute State sovereignty. Interspersed between these two perspectives are several variations of dual control.

I come here today with an open mind and ready to listen to contrasting viewpoints, yet quite cognizant of the improved highway safety record after the enactment of the national maximum speed limit during the Arab oil embargo, and aware of the fuel savings that can be obtained by driving 55-mile-per-hour as opposed to higher speeds.

According to the November 1984 report released by the Transportation Research Board of the National Research Council, 9,000 fewer people died in highway accidents in 1974, the year that the national speed limit became effective in all States. Of these lives saved, between 3,000 to 5,000 have been attributed to the imposition of the speed limit alone. Moreover, the Council estimates that 2,000 to 4,000 highway fatalities were prevented in 1983 solely as a result of the national speed limit. In arriving at that figure, they ascribed the savings in lives not simply to reduced speeds on highways but to the narrower distribution of speeds traveled brought about by passage of the law.

Notwithstanding what I have said, the members of the Council go on to assert that the cost of the 55-mile-per-hour speed limit in additional travel time endured per life lost is four times greater on rural interstates than the rest of the highway system. What this means is that the problem of wasted travel time is much more acute on rural—as opposed to city and suburban—interstates.

The equation derived is that 100 years of travel time could be salvaged at the margin, for the tolerance of one lost life and one serious injury, if the speed limit were increased to 60 to 65-mile-per-hour on all rural interstate routes. In other words, this 100 years' time could be put to more productive use if we were willing to accept the loss of life and serious injury. By citing this figure, I don't mean to imply at all that this is an exchange that should be entered into, only that there are those who will argue that it may be a beneficial exchange and those who will contend that it is not.

At least amidst the debate several things remain clear. First, we know that the national speed limit has been instrumental in preserving tens of thousands of human lives. Second, we know that it has been key in saving hundreds of millions of barrels of petroleum at a time when the United States was particularly vulnerable to even minor dislocations in the world oil market. Third, we know that in a 1982 Gallup poll 76 percent of the public supported the national speed limit, yet we also know that the burden levied on those traveling on rural highways is proportionally greater than the burden imposed upon motorists in the rest of the highway system.

Mr. Chairman, I look forward to this hearing. I think you have compiled a good list of witnesses and, as I mentioned earlier, I am keeping an open mind. I hope that the conclusion is one that will benefit the public.

Mr. GLICKMAN. Thank you, Mr. Reid. I appreciate that.

Mr. Nelson, do you have any comments?

STATEMENT OF HON. BILL NELSON, A MEMBER OF CONGRESS FROM THE STATE OF FLORIDA

Mr. NELSON. Thank you, Mr. Chairman. I appreciate the fact that you are having this hearing. I think it is necessary as we reexamine policies that are over a decade old.

I approach this with a little bit different background. You and I have shared, as members of the full committee, the traumas that this Nation has gone through, the most recent of which was 1979 and the last cutoff of oil coming out of the Persian Gulf region, and there will be another cutoff—I just don't know when it is—and we will go through a number of the problems associated with energy shortage that we have seen with the queuing up at gas lines, the panic buying, the hoarding. How all of that relates to our transportation policy, mass transit, the building of interstates and, indeed, the subject of this hearing—55 miles per hour—I think is of paramount importance. As you have already brought out, the safety factor is another major consideration, and so I look forward to the hearing of these witnesses.

Now you are the first, Mr. Chairman, to bring about these hearings. The actual substantive handling of legislation, as I understand it, will be in the Public Works and Transportation Committee, but by the fact of your leadership you can help chart the course of where legislation, if any, should go in this 99th Congress, and I thank you for doing that.

Mr. GLICKMAN. Thank you, Mr. Nelson.

Mr. Packard, do you have any comments?

STATEMENT OF HON. RON PACKARD, A MEMBER OF CONGRESS FROM THE STATE OF CALIFORNIA

Mr. PACKARD. Just briefly, I too am very grateful for these hearings. I serve on the Surface Transportation Subcommittee of Public Works and Transportation, and so there will be a definite coordination of the hearings here and the hearings that we will be holding there. I certainly recognize the conflicts in the question relative to safety issues, energy impacts, and the convenience and the desires of the driving public. Certainly it will be an interesting and important hearing, and I am looking forward to it.

Thank you.

Mr. GLICKMAN. Thank you very much.

We have four witnesses and we also have a member of the full committee, Mr. McCurdy, who we would ordinarily give precedence to, but I understand one of you has to leave very quickly. I think it's you, Bill, isn't it?

Mr. RICHARDSON. Yes.

Mr. GLICKMAN. Why don't we go ahead and let you give your statement quickly.

I don't know what Dave's time schedule is like. Why don't we just go ahead with this panel and then we'll have you?

We will start, since you have to leave, and we'll let all of you go one right after the other. We'll go Bill, Barbara, Joe, and Jim. Let's do it that way.

Mr. SKEEN. That's fair.

Mr. GLICKMAN. All right. Why don't you go ahead? Again, your entire statements will be a part of the record. I would ask that you try to keep your statements to 5 minutes if you can.

STATEMENT OF HON. BILL RICHARDSON, A MEMBER OF CONGRESS FROM THE STATE OF NEW MEXICO

Mr. RICHARDSON. Yes, Mr. Chairman. My statement will be even less than that.

I want to thank you and members of the subcommittee for giving me the opportunity to address the subcommittee on an issue that is very important to many rural Western States as well as to my own State of New Mexico—the 55-mile-per-hour speed limit.

Mr. Chairman, I realize that this point has been made many times but I feel very strongly that it must be made once more: Those of us in rural areas and States have been hurt by this law. While we recognize the 55-mile-per-hour speed limit has resulted in reduced fatalities and energy conservation, we believe the time is right to reevaluate a law passed in a time of crisis and whose impacts have been felt by different regions of the country in very unequal ways.

We are not advocating a return to the past—we are simply asking that the special needs of rural highway users be addressed. We are not advocating unreasonableness or unsafe policy—we are advocating fairness. We are not promoting change in those provisions of this law which are generally beneficial—we are simply seeking changes in those provisions which are not.

H.R. 693 is a bill which is narrow in scope. It would simply allow States to selectively increase the speed limit along remote interstate highways. A maximum speed limit of 65 miles per hour would only be allowed upon determination by the Secretary of Transportation that safety would not be adversely affected.

An affirmative vote for this legislation will mean many things. First and foremost, it will say that the Congress recognizes the special transportation needs of rural areas.

Second, it will have economic benefit for States such as New Mexico. In the rural district I represent, tourism is the second largest employer. I believe our tourism industry would benefit greatly if those traveling through New Mexico could reach their destinations both safely and quickly. Commerce in rural areas would also be enhanced by this change. Deliveries would be more timely, service would be quicker, communication would be enhanced.

Third, a vote in support of these changes would benefit law enforcement in remote areas. In States such as New Mexico we have a total of 300 State police officers to cover the entire State. They cover very large geographic areas and their responsibilities are many. Under "55-mile-per-hour duress" they spend a great deal of time issuing speeding tickets to comply with Federal law. I am sure my colleagues would agree with me that our law enforcement officers' time would be better spent fighting crime and protecting our citizens.

Last, this bill would allow increased speed on roads which currently have the lowest fatality rate per mile traveled of any highway in the country, while at the same time providing adequate safeguards and safety requirements to protect those users of rural interstate highways.

A recent CBS report on the subject of the 55-mile-per-hour speed limit aired a highway scene to illustrate the issue. This scene was taken on Interstate 40 in my district where, excepting Albuquerque, no New Mexico county traversed by an interstate highway has more than 40 people per square mile. Right now as I am speaking the New Mexico State Legislature is considering and will likely pass a memorial urging Congress to enact legislation permitting a higher speed limit. We take this issue very seriously in my State because it has serious economic and social consequences for all of us.

I would like to say, in closing, that my district is one of the largest and most rural in the country—I believe the fifth largest. In the last 2 years I have held over 360 town meetings throughout the area. I am known as the late Mr. Richardson, and this would be of direct personal benefit to me also. [Laughter.]

That is the selfish point that I wish to convey to the committee.

Nonetheless, Mr. Chairman, I commend you for holding this hearing. I think it is an important hearing. It is a discriminatory piece of legislation—the 55-mile-per-hour speed limit—in which we hope that the committee and the Congress give the States the flexibility to make decisions on their own.

Thank you very much.

[The prepared opening statement of Mr. Richardson follows:]

MR. CHAIRMAN, THANK YOU FOR GIVING ME THE OPPORTUNITY TO ADDRESS THE SUBCOMMITTEE ON AN ISSUE THAT IS VERY IMPORTANT TO MY HOME STATE OF NEW MEXICO -- THE 55 MILE PER HOUR SPEED LIMIT.

MR. CHAIRMAN, I REALIZE THIS POINT HAS BEEN MADE MANY TIMES OVER BUT I FEEL VERY STRONGLY THAT I MUST MAKE IT ONCE MORE -- THOSE OF US IN RURAL AREAS AND STATES HAVE BEEN HURT BY THIS LAW. WHILE WE RECOGNIZE THE 55 MILE PER HOUR SPEED LIMIT HAS RESULTED IN REDUCED FATALITIES AND ENERGY CONSERVATION, WE BELIEVE THE TIME IS RIGHT TO RE-EVALUATE A LAW PASSED IN A TIME OF CRISIS AND WHOSE IMPACTS HAVE BEEN FELT BY DIFFERENT REGIONS OF THE COUNTRY IN VERY UNEQUAL WAYS.

WE ARE NOT ADVOCATING A RETURN TO THE PAST -- WE ARE SIMPLY ASKING THAT THE SPECIAL NEEDS OF RURAL HIGHWAY USERS BE ADDRESSED. WE ARE NOT ADVOCATING UNREASONABLENESS OR UNSAFE POLICY -- WE ARE ADVOCATING FAIRNESS. WE ARE NOT PROMOTING CHANGE IN THOSE PROVISIONS OF THIS LAW WHICH ARE GENERALLY BENEFICIAL -- WE ARE SIMPLY SEEKING CHANGES IN THOSE PROVISIONS WHICH ARE NOT.

H.R. 693 IS A BILL WHICH IS NARROW IN SCOPE -- IT WOULD SIMPLY ALLOW STATES TO SELECTIVELY INCREASE THE SPEED LIMIT ALONG REMOTE INTERSTATE HIGHWAYS. A MAXIMUM SPEED LIMIT OF 65 MILES PER HOUR WOULD ONLY BE ALLOWED UPON DETERMINATION BY THE SECRETARY OF TRANSPORTATION THAT SAFETY WOULD NOT BE ADVERSELY AFFECTED.

AN AFFIRMATIVE VOTE FOR THIS LEGISLATION WILL MEAN MANY THINGS.

FIRST AND FOREMOST, IT WILL SAY THAT THE CONGRESS RECOGNIZES THE SPECIAL TRANSPORTATION NEEDS OF RURAL AREAS.

SECOND, IT WILL HAVE ECONOMIC BENEFIT FOR STATES SUCH AS NEW MEXICO. IN THE RURAL DISTRICT I REPRESENT, TOURISM IS THE SECOND LARGEST EMPLOYER. I BELIEVE OUR TOURISM INDUSTRY WOULD BENEFIT GREATLY IF THOSE TRAVELLING THROUGH NEW MEXICO COULD REACH THEIR DESTINATIONS BOTH SAFELY AND QUICKLY. COMMERCE IN RURAL AREAS WOULD ALSO BE ENHANCED BY THIS CHANGE -- DELIVERIES WOULD BE MORE TIMELY, SERVICE WOULD BE QUICKER, COMMUNICATION WOULD BE ENHANCED.

THIRD, A VOTE IN SUPPORT OF THESE CHANGES WOULD BENEFIT LAW ENFORCEMENT IN REMOTE AREAS. IN NEW MEXICO, WE HAVE A TOTAL OF 300 STATE POLICE OFFICERS TO COVER THE ENTIRE STATE -- THEY COVER VERY LARGE GEOGRAPHIC AREAS AND THEIR RESPONSIBILITIES ARE MANY. UNDER "55 MILE PER HOUR DURESS", THEY SPEND A GREAT DEAL OF TIME ISSUING SPEEDING TICKETS TO COMPLY WITH FEDERAL LAW. I AM SURE MY COLLEAGUES WOULD AGREE WITH ME THAT OUR LAW ENFORCEMENT OFFICERS TIME COULD BE BETTER SPENT FIGHTING CRIME AND PROTECTING OUR CITIZENS..

LASTLY, THIS BILL WOULD ALLOW INCREASED SPEEDS ON ROADS WHICH CURRENTLY HAVE THE LOWEST FATALITY RATE PER MILE TRAVELED OF ANY HIGHWAY IN THE COUNTRY WHILE AT THE SAME TIME PROVIDING ADEQUATE SAFEGUARDS AND SAFETY REQUIREMENTS TO PROTECT THOSE USERS OF RURAL INTERSTATE HIGHWAYS.

A RECENT CBS REPORT ON THE SUBJECT OF THE 55 MILE PER HOUR LIMIT AIRED A HIGHWAY SCENE TO ILLUSTRATE THE ISSUE. THIS SCENE WAS TAKEN ON

INTERSTATE 40 IN MY DISTRICT -- WHERE, EXCEPTING ALBUQUERQUE, NO NEW MEXICO COUNTY TRAVERSED BY AN INTERSTATE HIGHWAY HAS MORE THAN 40 PEOPLE PER SQUARE MILE. RIGHT NOW, AS I AM SPEAKING, THE NEW MEXICO STATE LEGISLATURE IS CONSIDERING, AND WILL LIKELY PASS, A MEMORIAL URGING CONGRESS TO ENACT LEGISLATION PERMITTING A HIGHER SPEED LIMIT. WE TAKE THIS ISSUE VERY SERIOUSLY IN NEW MEXICO BECAUSE IT HAS SERIOUS CONSEQUENCES FOR NEW MEXICANS.

I WOULD LIKE TO SAY IN CLOSING, THAT MY DISTRICT IS ONE OF THE LARGEST AND MOST RURAL IN THE COUNTRY. IN THE LAST TWO YEARS I HELD OVER 360 TOWN MEETINGS THROUGHOUT THE AREA. I AM SURE MY CONSTITUENTS WOULD ATTEST TO THE FACT THAT I WAS MORE OFTEN LATE THAN NOT. MR. CHAIRMAN, I ATTRIBUTE MY TARDINESS IN LARGE PART TO TRAVELLING OVER EMPTY RURAL ROADS AT 55 MILES PER HOUR IN ORDER TO COMPLY WITH FEDERAL LAW.

I URGE MY COLLEAGUES TO SUPPPORT THIS LEGISLATION AND THANK YOU AGAIN FOR THE OPPORTUNITY TO ADDRESS THIS IMPORTANT ISSUE.

Mr. GLICKMAN. Thank you. You realize if we change the speed limit you'll no longer have any excuses. [Laughter.]

If you need to leave, that's fine.

Representative Vucanovich.

Mr. MCCURDY. Mr. Chairman.

Mr. GLICKMAN. Yes.

Mr. MCCURDY. Before Bill leaves, I just want to commend him on his statement. Bill is a cosponsor of the legislation that I introduced, and we share Interstate 40, as probably many on this panel and in Congress do. Again, I just appreciate his serious work. This is a very serious matter, even though we sometimes like to tell personal anecdotes, but Bill is a very conscientious member and I think he raises a very, very important point.

Mr. GLICKMAN. Thank you.

Barbara.

STATEMENT OF HON. BARBARA VUCANOVICH, A MEMBER OF CONGRESS FROM THE STATE OF NEVADA

Ms. VUCANOVICH. Thank you, Mr. Chairman, for holding this meeting. We appreciate it very much.

I would like to revise and extend my remarks and submit Senator Hecht's testimony.

Mr. GLICKMAN. Yes; without objection, his statement will appear in the record as well.

Ms. VUCANOVICH. Thank you.

I am testifying before you today in support of allowing individual States to lift the 55-mile-per-hour speed limit on certain rural interstates. In fact, I have introduced legislation which would repeal the 55-mile-per-hour speed limit and allow States to determine what speed should be set for rural interstates. Also, my bill would prohibit the Federal Government from threatening to withhold Federal highway funds from States that experience difficulty in meeting Federal enforcement standards.

I know many here today will testify that the 55-mile-per-hour speed limit has, since its enactment in 1974, drastically decreased fatalities on our Nation's highways, and I don't dispute that lower speeds have contributed to lower fatalities. However, I do believe that other factors have also contributed to reduced fatalities during this same time period.

I would like to submit two separate studies done on this subject by the Washington State Department of Transportation and by the Utah State Department of Transportation. I have summarized these reports in my testimony but, due to time constraints, I won't attempt to summarize these reports now.

The point of these studies is that decreased fatality rates on our Nation's highways are not solely the result of lower highway speed limits. Certainly traveling at a slower rate of speed can and does contribute to a lessening of the severity of many collisions. However, improvements in road construction, improvements in automobile engineering, mandatory seatbelt laws, and the national war against drunk drivers also play a significant and important role in highway safety.

The second concern that I have in proposing to lift the 55-mile-per-hour speed limit is that the threat of withholding much-needed Federal highway funds from States if the 55-mile-per-hour speed limit is not adequately enforced. This heavy handed Federal action has taken away a great deal of management and decisionmaking authorities from States and centered this power instead in Washington, DC. State troopers now find themselves preoccupied with issuing speeding citations when other, more serious offenses and needs may go unanswered. In my own State we have fewer individuals even than they do in New Mexico. We have only 183 individuals representing the total number of troopers available to patrol our roads. I am certain that you can understand that speeding citations may not represent the best allocation of time for these people.

I believe States should have the responsibility for setting speed limits within their own boundaries. There are many different environments that make up our States. In the congested East, States would be able to set lower speed limits to adhere to their particular needs. However, in the West where there is a long way between cars, speed limits should be lifted on lightly traveled rural interstates.

Safety must be our main concern, but all factors contributing to safety should be given equal consideration in any discussion. In addition, time and the value of an individual's time must also be given consideration. On a trip across Nevada from Elko to Las Vegas, the difference in travel time required between 55 miles per hour and 70 miles per hour can approach 2 hours difference. That trip takes nearly 9 hours at 55 but takes only 6.6 hours at 70.

Finally, this legislation deserves consideration because it adheres to a fundamental principle of government that we have somehow abandoned in recent years. States' rights have always occupied a special place in American law. This legislation would return to the States the right to determine what speeds are safe on their own roads. Repeal of the 55-mile-per-hour speed limit in no way mandates or guarantees that limits will be raised—only that those living in the States will have the ability to make their own determinations based upon familiarity with their environment and knowledge of driving conditions that may exist at any given time.

I would like to again thank the chairman very much for holding these hearings. This is a very important issue in my State and we hope that the committee will give it serious consideration. Thank you.

[The prepared statements of Congresswoman Vucanovich and Senator Hecht follows:]

TESTIMONY BEFORE THE SUBCOMMITTEE ON TRANSPORTATION, AVIATION, AND MATERIALS
UNDER THE HOUSE SCIENCE AND TECHNOLOGY COMMITTEE
BY
CONGRESSMAN BARBARA F. VUCANOVICH

Thank you Mr. Chairman and members of the Subcommittee. I am testifying before you today in support of allowing individual states to lift the 55 m.p.h. speed limit on certain rural interstates. In fact, I have introduced legislation which would repeal the 55 m.p.h. speed limit and allow states to determine what speed should be set for rural interstates. Also, my bill would prohibit the federal government from threatening to withhold federal highway funds from states that experience difficulty in meeting federal enforcement standards.

Many here today will testify that the 55 m.p.h. speed limit has, since its enactment in 1974, drastically decreased fatalites on our nation's highways. I will not dispute that lower speeds have contributed to lower fatalities. However, I do believe that other factors have also contributed to reduced fatalities during the same time period. I would like to submit two separate studies done on this subject by the Washington State Department of Transportation, and by the Utah State Department of Transportation. I have summarized these reports in my testimony, but due to time constraints I will not would like to summarize these studies and submit them in full for the record.

In 1974, the 55 m.p.h. speed limit law was enacted in response to the 1974 energy crisis that the United States was experiencing as a result of the Arab Oil Embargo. From 1973 until the summer of 1974, the "energy crunch" was in full swing. During this time, an overall decline in travel resulted from the gasoline shortage. Recreational trips and social trips were curtailed drastically and/or taken mainly on weekends, gasoline was difficult to obtain, and some localities even banned the sale of gasoline on certain days of the week to certain customers during this period.

Recreational and weekend trips have very high fatal accident and fatality rates. The charts that I have submitted in the record show what happened to traffic volumes on rural highways in Washington state where the speed limits had previously been 60 or 70 m.p.h.

In summary, the sharp decrease in traffic fatalities during 1974 coincided with a pronounced drop in high-risk rural driving of the nature I described earlier. The gasoline shortage and accompanying rapid escalation in fuel prices were responsible for this abrupt decrease in vehicle miles traveled for unnecessary purposes. When gasoline once again became plentiful and consumers had adjusted to the higher prices, both travel patterns and number of fatalities returned to their previous levels in Washington state.

Also, highway improvememts have helped reduce the nation's accident and fatality rates considerably. The interstate highway system has demonstrated convincingly that highways designed for higher speeds are safe. That highway system carries a large portion of the high speed traffic, yet nationwide the death rates are far lower than on the the other systems that have lower speed limits. This decrease has occurred mainly due to highway improvements such as median barriers, wider shoulders, new pavement markings, etc.

Our automobiles are certainly better equipped with mandatory safety equipment such as seatbelts and head restraints that prevent whiplash than they were 10 years ago. Manufacturers are constantly testing safety equipment in automobiles today to ensure that every possible step is taken to reduce fatality rates and accidents throughout the country. In addition, several states have already enacted mandatory seat belt legislation, and many other states will consider similar measures in upcoming legislative sessions.

Mr. Chairman, my point is that decreased fatality rates on our nation's highways are not solely the result of lower highway speed limits. Certainly, traveling at a slower rate of speed can and does contribute to a lessening of the severity of many collisions. However, improvements in road construction, improvements in automobile engineering, mandatory seat belt laws, and the national war against drunk drivers also play a significant and important role in highway safety.

The second concern that I have in proposing to lift the 55 m.p.h. speed limit is the threat of withholding much-needed federal highway funds from states if the 55 m.p.h. speed limit is not adequately enforced. This heavy-handed federal action has taken away a great deal of management and decision making authority from states, and centered this power instead in Washington, DC. Many state highway departments have found themselves experiencing serious shortages of manpower as a result of new enforcement procedures. In addition, state troopers now find themselves preoccupied with issuing speeding citations when other, more serious offenses and needs may go unanswered. In my own state of Nevada, 183 individuals represent the total number of troopers available to patrol our roads. I'm certain you can understand that speeding citations may not represent the best allocation of time for these people.

Fundamental in any formation of law and government is the proposition that laws cannot be effectively enforced without the consent and voluntary compliance of the public majority. While all concerned individuals and agencies voice consent and acceptance of the 55 m.p.h. speed limit, each violation is a silent vote that the 55 m.p.h. speed limit is unacceptable. In Nevada, alone, the only penalty for exceeding the speed limit between 56 and 70 m.p.h. is a $5.00 fine. This is surely not an incentive for drivers to drive 55 in Nevada. Even the Transportation Research Board's Special Report, 55: A Decade of Experience states that "nearly three-fourths of drivers drive at speeds in excess of 55 m.p.h. on rural interstates."

I believe states should have the responsibility for setting speed limits within their own boundaries. There are many different environments that make up our states. In the congested East, states would be able to set lower speed limits to adhere to their particular needs. However in the West, where there is a long way between cars, speed limits should be lifted on lightly traveled rural interstates.

Safety must be our main concern, but all factors contributing to safety should be given equal consideration in any discussion. In addition, time and the value of an individual's time must also be given consideration. On a trip across Nevada, from Elko to Las Vegas, the difference in travel time required between 55 and 70 miles per hour can approach 2 hours difference. That trip takes nearly 9 hours at 55, but takes only 6.6 hours at 70.

And, finally, this legislation deserves consideration because it adheres to a fundamental principle of government that we have somehow abandoned in recent years. State's rights have always occupied a special place in American law. This legislation would return to the States, the right to determine what speeds are safe on their own roads. Repeal of the 55 limit in no way mandates or guarantees that limits will be raised...only that those living in the states will have the ability to make their own determinations based upon familiarity with their environment, and knowledge of driving conditions that may exist at any given time.

Statement of Senator Chic Hecht
before the
House Subcommittee on Transportation, Aviation and Materials
of the
House Committee on Science and Technology

Mr. Chairman:

I would like to thank the Subcommittee on Transportation, Aviation and Materials for holding this hearing today on the National Research Council's report 55: A Decade of Experience. I believe the entire issue of the 55 mile per hour speed limit is of extreme importance and interest to all Americans and one I am hopeful will be resolved adequately in the 99th Congress.

Mr. Chairman, as we all are aware, the Arab oil embargo over ten years ago created one of the most threatening and economically devastating situations ever witnessed by this country. American lifestyles were drastically altered and for the first time in modern-day America, the abundance and convenience of life, which we all were used to, was severely restricted. As we watched energy prices increase four-fold, conservation became our primary goal with the most visible action being the lowering of speed limits on our roads and highways to 55 miles per hour. In 1974, Congress made the 55 mph law permanent.

Today, Mr. Chairman, the situation is much different. The American people responded to the oil embargo in a strong and resourceful fashion. Advanced technology made our cars more fuel efficient, strict conservation was adhered to and alternative energy sources were developed. In the past few years, a renewed economy has created an environment where energy supplies are abundant, oil prices continue to decline and the adverse effects of the embargo are all but forgotten.

As the memory of the oil embargo has all but faded, great dispute has surfaced in many sectors of society today over whether or not the original 55 mph law is as effective and useful as it once was. The recent report of the National Research Council clearly raises questions about the state of 55 and leaves the door open for change. NRC's report acknowledges the benefits of 55, such as lower highway fatalities and reduced fuel consumption, but it also stated that in certain circumstances, the speed limit might justifiably be raised. Moreover, in the past few years, compliance with the 55 mph law has dramatically decreased and

States appear to have lost interest in enforcing the law, even with the threat of possibly losing Federal highway construction dollars.

The National Research Council report states that, "As with many other policies that attempt to modify public behavior, the benefits of the 55 mph speed limit diminished along with public awareness and compliance with the law." Indeed, Mr. Chairman, compliance has decreased dramatically since 1974 and it is now estimated that over 75 percent of all drivers today exceed the 55 mph limit. In my state of Nevada, that figure exceeds 82 percent. Even more significant than these compliance figures Mr. Chairman, the average national speed continues to increase but highway fatalities continue to decrease. This can be directly attributed to the safety gains made in automobile construction, better engineered highways, improved emergency medical facilities and increased willingness of drivers to use seatbelts.

Because of the inadequacies of the current 55 mph law, the unpopularity exhibited throughout the country, and the trend away from compliance, I recently introduced legislation, S. 329, the Highway Speed Modification Act of 1985, which is a balanced and realistic approach to changing the current 55 mph law. This legislation has received considerable support and interest since its introduction in January and I have been pleased with this response. I would urge the committee to review this bill since the provisions of it modify the current 55 mph law in what I believe to be an equitable and fair manner. Basically S. 329 would:

- allow each state to raise speed limits to as high as 65 mph on roads outside urban areas. Urban areas would be defined as communities with a population of 50,000 people or more;
- it would give the States the right to determine which roads, outside urban areas, are suitable for higher speeds;
- it would hold speed limits within urban areas at the current 55 mph.

Mr. Chairman, I firmly believe that if the American public is to ever experience the benefits of the 55 mph law, some modification must be enacted. I think that is the essence of the National Research Council report and believe Congress should follow it's message. A change is in order. I hope this Committee will arrive at a similar conclusion and will make that recommendation to the entire House of Representatives as well.

Thank you Mr. Chairman.

Mr. GLICKMAN. Thank you very much.

Representative Skeen?

Mr. SKEEN. Thank you, Mr. Chairman, and members of the committee. I appreciate this opportunity——

Mr. GLICKMAN. Excuse me. You may feel free to stay or leave at your pleasure.

Ms. VUCANOVICH. Thank you.

STATEMENT OF HON. JOE SKEEN, A MEMBER OF CONGRESS FROM THE STATE OF NEW MEXICO

Mr. SKEEN. Thank you, Mr. Chairman, and members of the committee. It is a pleasure to be here and to have this opportunity to talk about this issue—I think one of the most important issues that we are going to face in this legislative term.

The reason I am here today is to perform one of the most difficult tasks anyone can face, and that is the task of refuting perception with reality.

One of our Nation's most well-known examples of perception is a couplet that goes something like, "Lizzie Borden took an ax and gave her mother 40 whacks. When she saw what she had done, she gave her father 41." The whole country believes that Lizzie Borden was an ax murderer of the worst sort. Now that's perception.

The reality is that when Lizzie Borden was taken to court for the heinous crime, she was found innocent.

Perception: a vicious ax murderer. Reality: innocent.

Now you may be wondering what Lizzie Borden has to do with today's hearing. While the circumstances are certainly different, the situation is the same.

Studies have shown that 76 percent of the American people believe that the 55-mile-per-hour speed limit saves lives and fuel. At the same time, 75 percent do not believe that tickets should be issued for exceeding the 55-mile-per-hour speed limit.

Now that's the perception, and it's a perception that is shared, I'm sure, by the majority of the Members of this Congress. It's believed because it is easy to understand and it seems to make sense, but the simple fact and the reality is that it makes no sense at all.

The study with which we are concerned today—which is "55 A Decade of Experience"—shows that the 55-mile-per-hour speed limit reduces by about 2 percent the amount of fuel used in this Nation each year. We could save that much if we saw to it that our tires were properly inflated. Why not just put air pumps at the rest stops along the interstates?

And do you realize how much more time Americans spend on the highways each year because of the lower speed limit? This same study puts it at 1 billion hours. Now there is no way to put a value on those wasted hours but if you compute them at the current minimum wage rate of $3.35, you come up with a figure that would put a sizeable hole in the deficit. Radio Commentator Paul Harvey once suggested that more lives could be saved by putting that money into kidney dialysis machines or by putting smoke detectors in every home in the United States. It's just simply a matter of priorities. More lives would be saved that way, but the method wouldn't be nearly so dramatic.

The reality is that today's vehicles operate tremendously more efficiently than did those of 1974 when this panic-produced legislation was passed. We could return to the speed limits of 1973 and easily produce a vastly smaller number of gallons of fuel used per mile driven. The perception may be that the 55-mile-per-hour speed limit saves fuel, but the reality is that the cost of any fuel it saves is extremely high.

Now let's talk about the perception and the reality concerning highway safety and the 55-mile-per-hour speed limit. We all know the perception: People are not driving so fast, so when they collide they are less likely to be killed. The 55-mile-per-hour speed limit—we believe—is saving lives. Not so. The reality is that the number of fatalities per 100 million miles driven has been dropping since 1950, when it stood at 7.59. It was at 4.24 in 1973 and it dropped to 3.59 in 1974, the year the national speed limit became law. By 1982 the figure had dropped to 2.93. Something other than the change in the speed limit must be the reason.

Some of the reasons are that seatbelts are more effective and have come into wider use. Vehicles have much better brakes, suspension, tires, and chassis. They are constructed to divert the force of a collision away from the car's occupants. Highways have been greatly improved. Curves are better banked and more gently bent. Utility poles now break away when hit, rather than serve as an immovable object for a car to wrap around. Guardrails now bend down into the ground, rather than pointing at oncoming traffic like a spear ready to impale a Buick. Impact-absorbing safety barrels surround potentially deadly obstacles.

The list could go on and on, but the reality is simple: There are fewer highway deaths today partly because there are fewer ways to be killed on our highways today than there were when the 1974 law was enacted.

Now let's look at this a little more. When Joan Claybrook was head of the National Highway Traffic Safety Administration, the emphasis was on enforcement of the 55-mile-per-hour speed limit. The year before she took over, 45,500 people died on the Nation's highways. In her last year, 51,100 died on our highways. Yet in 1982, when Raymond Peck headed NHTSA, deaths dropped by 1,500 and appear to be declining further. The difference is that Peck has focused on helping States go after drunk drivers. It takes little genius to understand that drunk drivers kill more people than those driving faster than 55 miles per hour.

The perception is that the 55-mile-per-hour speed limit saves both fuel and lives. The reality is that it does neither.

Let's face reality and come up with legislation that will turn the perception into reality. Let's tie our Federal highway funds to the number of fatalities per million miles driven. That's a common and a basic statistic. We don't need to tell the States how to do this, and indeed we shouldn't. We simply pass a law telling the States that if they want Federal highway funds, they have to make it safer to drive in their State. I believe, Mr. Chairman, it's as simple as that.

I thank you very much for this opportunity, and I certainly do support repeal of the law.

[The prepared statement of Mr. Skeen follows:]

TESTIMONY

OF

HONORABLE JOE SKEEN
MEMBER OF CONGRESS

before the

TRANSPORTATION, AVIATION

AND MATERIALS SUBCOMMITTEE

Washington, DC
February 21, 1985

MR. SKEEN -- III

MR. CHAIRMAN:

I'M HERE TODAY TO TRY TO PERFORM ONE OF THE MOST DIFFICULT TASKS ONE CAN FACE -- THE TASK OF REFUTING PERCEPTION WITH REALITY.

ONE OF OUR NATION'S MOST WELL-KNOWN EXAMPLES OF PERCEPTION IS A COUPLET THAT GOES SOMETHING LIKE -- "LIZZIE BORDEN TOOK AN AXE AND GAVE HER MOTHER 40 WHACKS. WHEN SHE SAW WHAT SHE HAD DONE, SHE GAVE HER FATHER 41." THE WHOLE COUNTRY BELIEVES THAT LIZZIE BORDEN WAS AN AXE MURDERER OF THE WORST SORT. THAT'S THE PERCEPTION.

THE REALITY IS THAT WHEN LIZZIE BORDEN WAS TAKEN TO COURT FOR THE HEINOUS CRIME, SHE WAS FOUND INNOCENT.

PERCEPTION -- A VICIOUS AXE MURDERER. REALITY -- INNOCENT!

NOW YOU MAY BE WONDERING WHAT LIZZIE BORDEN HAS TO DO WITH TODAY'S HEARING. WHILE THE CIRCUMSTANCES ARE CERTAINLY DIFFERENT, THE SITUATION IS THE SAME.

STUDIES HAVE SHOWN THAT 76 PERCENT OF THE AMERICAN PEOPLE BELIEVE THAT THE 55 MILE AN HOUR SPEED LIMIT SAVES LIVES AND FUEL. AT THE SAME TIME, 75 PERCENT DO NOT BELIEVE TICKETS SHOULD BE ISSUED FOR EXCEEDING 55 MILES AN HOUR.

-- MORE --

MR. SKEEN --- 222

THAT'S THE PERCEPTION AND IT'S A PERCEPTION SHARED -- I'M SURE -- BY THE MAJORITY OF THE MEMBERS OF THIS CONGRESS. IT'S BELIEVED BECAUSE IT IS EASY TO UNDERSTAND AND SEEMS TO MAKE SENSE. BUT THE SIMPLE FACT AND THE REALITY IS THAT IT MAKES NO SENSE AT ALL.

THE STUDY WITH WHICH WE'RE CONCERNED TODAY "55: A DECADE OF EXPERIENCE" SHOWS THAT THE 55 MILE AN HOUR SPEED LIMIT REDUCES BY ABOUT 2 PERCENT THE AMOUNT OF FUEL USED IN THIS NATION EACH YEAR. WE COULD SAVE THAT MUCH IF WE SAW TO IT THAT OUR TIRES WERE PROPERLY INFLATED. WHY NOT JUST PUT AIR PUMPS AT THE REST STOPS ALONG THE INTERSTATES?

AND DO YOU REALIZE HOW MUCH MORE TIME AMERICANS SPEND ON THE HIGHWAYS EACH YEAR BECAUSE OF THE LOWERED SPEED LIMIT? THIS SAME STUDY PUTS IT AT ONE BILLION HOURS. NOW THERE'S NO WAY TO PUT A VALUE ON THOSE WASTED HOURS BUT IF YOU COMPUTE THEM AT THE CURRENT MINIMUM WAGE OF $3.35, YOU COME UP WITH A FIGURE THAT WOULD PUT A SIZEABLE DENT IN THE DEFICIT. RADIO COMMENTATOR PAUL HARVEY ONCE SUGGESTED THAT MORE LIVES COULD BE SAVED BY PUTTING THAT MONEY INTO KIDNEY DIALYSIS MACHINES OR BY PUTTING SMOKE DETECTORS IN EVERY HOME IN AMERICA. IT'S ✓ SIMPLE A MATTER OF PRIORITIES. MORE LIVES WOULD BE SAVED THAT WAY BUT THE METHOD WOULDN'T BE SO DRAMATIC.

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THE REALITY IS THAT TODAY'S VEHICLES OPERATE TREMENDOUSLY MORE EFFICIENTLY THAN DID THOSE OF 1974 WHEN THIS PANIC-PRODUCED LEGISLATION WAS PASSED. WE COULD RETURN TO THE SPEED LIMITS OF 1973 AND EASILY PRODUCE A VASTLY SMALLER NUMBER OF GALLONS OF FUEL USED PER MILE DRIVEN.

THE PERCEPTION MAY BE THAT THE 55 MILE AN HOUR SPEED LIMIT SAVES FUEL -- BUT THE REALITY IS THAT THE COST OF ANY FUEL IT SAVES IS JUST TOO HIGH.

NOW. LET'S TALK ABOUT THE PERCEPTION AND REALITY CONCERNING HIGHWAY SAFETY AND THE 55 MILE AN HOUR SPEED LIMIT.

WE ALL KNOW THE PERCEPTION -- PEOPLE ARE NOT DRIVING SO FAST SO EVEN WHEN THEY COLLIDE THEY ARE LESS LIKELY TO BE KILLED. THE 55 MILE AN HOUR SPEED LIMIT -- WE BELIEVE -- IS SAVING LIVES.

NOT SO. THE REALITY IS THAT THE NUMBER OF FATALITIES PER 100 MILLION MILES DRIVEN HAS BEEN DROPPING SINCE 1950 WHEN IT STOOD AT 7.59. IT WAS AT 4.24 IN 1973 AND DROPPED TO 3.59 IN 1974 -- THE YEAR THE NATIONAL SPEED LIMIT BECAME LAW. BY 1982, THE FIGURE HAD DROPPED TO 2.93. SOMETHING OTHER THAN THE CHANGE IN THE SPEED LIMIT MUST BE THE REASON.

-- MORE --

SEAT BELTS ARE MORE EFFECTIVE AND HAVE COME INTO WIDER USE. VEHICLES HAVE MUCH BETTER BRAKES, SUSPENSIONS, TIRES AND CHASSIS. THEY ARE CONSTRUCTED TO DIVERT THE FORCE OF A COLLISION AWAY FROM THE CAR'S OCCUPANTS. HIGHWAYS HAVE BEEN GREATLY IMPROVED. CURVES ARE BETTER BANKED AND MORE GENTLY BENT. UTILITY POLES NOW BREAK AWAY WHEN HIT RATHER THAN SERVE AS AN IMMOVEABLE OBJECT FOR A CAR TO WRAP AROUND. GUARDRAILS NOW BEND DOWN INTO THE GROUND RATHER THAN POINTING AT ONCOMING TRAFFIC LIKE A SPEAR READY TO IMPALE A BUICK.... IMPACT-ABSORBING SAFETY BARRELS SURROUND POTENTIALLY DEADLY OBSTACLES. THE LIST COULD GO ON AND ON BUT THE REALITY IS SIMPLE. THERE ARE FEWER HIGHWAY DEATHS TODAY PARTLY BECAUSE THERE ARE FEWER WAYS TO BE KILLED ON OUR HIGHWAYS TODAY THAN THERE WERE WHEN THE 1974 LAW WAS ENACTED.

LET'S LOOK AT THAT A LITTLE MORE.

WHEN JOAN CLAYBROOK WAS HEAD OF THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, THE EMPHASIS WAS ON ENFORCEMENT OF THE 55 MILE AN HOUR SPEED LIMIT. THE YEAR BEFORE SHE TOOK OVER, 45,500 PEOPLE DIED ON THE NATION'S HIGHWAYS. IN HER LAST YEAR, 51,100 WERE WIPED OUT. YET IN 1982, WHEN RAYMOND PECK HEADED NHTSA, DEATHS DROPPED BY 1,500 AND APPEAR TO BE DECLINING FURTHER.

THE DIFFERENCE IS THAT PECK HAS FOCUSED ON HELPING STATES GO AFTER DRUNK DRIVERS. IT TAKES NO GENIUS TO UNDERSTAND THAT DRUNK DRIVERS KILL MORE PEOPLE THAN THOSE DRIVING FASTER THAN 55 MILES AN HOUR.

-- MORE --

PERCEPTION AND REALITY.

THE PERCEPTION IS THAT THE 55 MILE AN HOUR SPEED LIMIT SAVES BOTH FUEL AND LIVES.

THE REALITY IS THAT IT DOES NEITHER.

LET'S FACE REALITY AND COME UP WITH LEGISLATION THAT WILL TURN THE PERCEPTION INTO THE REALITY.

LET'S TIE OUR FEDERAL HIGHWAY FUNDS TO THE NUMBER OF FATALITIES PER MILLION MILES DRIVEN -- A COMMON STATISTIC.

WE DON'T NEED TO TELL THE STATES HOW TO DO THIS AND -- INDEED -- WE SHOULDN'T. WE SIMPLY PASS A LAW TELLING THE STATES THAT IF THEY WANT FEDERAL HIGHWAY FUNDS THEY HAVE TO MAKE IT SAFER TO DRIVE IN THEIR STATE. IT'S AS SIMPLE AS THAT.

-- END --

Mr. **Glickman**. Thank you.

Mr. **Reid**. Mr. Chairman?

Mr. **Glickman**. Yes?

Mr. **Reid**. May I ask Representative Skeen a question?

Mr. **Glickman**. Certainly.

Mr. **Reid**. You made a good case for the 55-mile-per-hour speed limit not contributing to the saving of lives, but I didn't hear you say anything factually as to why the 55-mile-per-hour speed limit doesn't save fuel.

Mr. **Skeen**. I said that the cost of the saving of the fuel was far more than the fuel itself, when you compute it in time lost.

Mr. **Reid**. I understand.

Mr. **Skeen**. If it's saving only 2 percent of the fuel, Mr. Reid, I believe that it's costing us a great deal more than we should be paying. Does that make any——

Mr. **Reid**. I understand your point.

Mr. **Skeen**. All right.

Mr. **Glickman**. Why don't we go on and let Representative Hansen give his testimony?

Go ahead, Jim.

STATEMENT OF HON. JIM HANSEN, A MEMBER OF CONGRESS FROM THE STATE OF UTAH

Mr. **Hansen**. Thank you, Mr. Chairman. I, too, appreciate your holding this meeting and being with you today. I would just like to capsulate this, if I may.

Let me just say, Mr. Chairman, for years I investigated a number of accidents, negotiated those fatalities and serious accidents for a large insurance company, and negotiated those through trial. Let me also say that I found myself in a position in the State legislature as chairman of the public safety commission.

I don't know if that makes me an authority on it, but I have introduced a bill which I feel is a little midground between the two that we have heard today. I really, realistically do not feel that you can give to the States the complete right to take this over. However, I am a big States rights man and I have to say I think they should have something to do with it.

The bill that I have introduced says this: That the speed limit would be 55 miles per hour in a congested area and 70 miles per hour in a noncongested area. I believe that the States should determine what that would be. As to what constitutes a congested area, we would leave that up to the Department of Transportation as I know, having talked with them a number of times, that they do have some great facilities to determine what a congested area is. In my home State of Utah, around Salt Lake, you would say that's a congested area. Maybe all along the Wasatch Front, that would be a congested area. I do think that highway funds would have to be withheld if they didn't do this.

Now where I disagree with my good friend from Nevada, Barbara, and others is this: I guess I served in the State legislature too long. I used to be speaker of the house. I was on a panel of the National Conference of State Legislators, and I find that my good friends in the State legislative bodies, we all are just like we are here. Since this has come up I have had a number of them write and say, "Well, I would like to put the speed limit at 35 in some areas and unlimited, like the autobahn is in Germany, in other areas." I don't know in America if we dare take that chance, that we would find ourselves with unlimited speed both ways, so I personally feel it should go 70 and 55 and that would be the parameters that the States should set.

Let me also add to this that I remember one of our past Governors in the State legislature, Cal Rampton, a very fine Democrat, who made this statement at one time when I was a freshman. He said, "Don't pass laws people won't obey." Very candidly, you coming from your State, and my State that is open, Congressman Reid's State, I just don't find people that do that.

I don't really enjoy driving from here to Utah. In fact, I detest it, but about once a year I have to have that unpleasant experience. As you drive across your State of Kansas, or Nebraska, or Wyoming, those long, long States that never seem to end, and you do 55 miles per hour——

Mr. GLICKMAN. You're not disparaging the physical beauty of my State, are you? [Laughter.]

Mr. HANSEN. Congressman, that's the only reason I go that way, is so I can see the Sandhill cranes in your State.

As I go across there, I rarely see people doing 55. In fact, I was going through one of those States not too long ago, and you know how it is when you drive all day long. I happened to get up to 75. Now I admit my transgression to the committee and beg forgiveness but still, on the other hand, a highway patrolman pulled me over. As he gave me a warning ticket he said, "Mr. Hansen, would you please keep it at 65?" [Laughter.]

So now, in effect, we are not seeing people obey this law. They just don't do it.

Now you get all the time, when you introduce legislation like this, calls from all over America that say, "Well, if you go to 70 people will just drive 80." Not so. I go back to when I was chairman of the public safety council in the State of Utah. Around 70, people stayed close to that. It was a law people believed in. So why can't we take the middle ground, is what we're saying in my legislation. Why do we have to be like Virginia and New York and these eastern States? Why can't you treat us all a little differently? We're different. Our States are different, the geography is different, the geology is different. Why don't we just be different?

Basically, Mr. Chairman, that's what I'm saying. I hope we take a look at this.

Sure, speed kills. I have no argument at all with that. I know drunk driving kills more than that. In 1981 I went to the President of the United States. He sat down and he penned a letter to then Drew Lewis and said, "Let's do something about this." As a result of that, we have saved an awful lot of lives. I feel really good about that. As one who has been involved in that type of work for many years, I come down on the idea that the drunk driver is the worst hazard we have.

But right now I think that there is some discrimination. Let me say, very respectfully, I don't think John Q. Citizen is equipped like the truckdriver. He has got his CB's and his "fuzz busters" and the whole bit, and he just goes down the road like he owns it many times. The No. 1 complaint I get when we're talking transportation is, there are two sets of rules, one for the truck driver and one for the others

If this goes into effect, if we find ourselves in the position that we go to 70 and we go to 55, I think legislative intent should be that we religiously and vigorously enforce the law. If it's 55, let's make them drive 55. If it's 70, let's let them go 70, but let's not look the other way and say, "Well, we really don't care in this instance. Let them go a little faster because nobody believes in it anyway."

I went through—and I will close on this—I went through a radar trap in my home State the other day. I purposely set my cruise control at 65. I saw the highway patrolman, radar. I could see way down the road four more cars waiting. Again, 65, they let me go right through and they were catching those going faster. Again I say, why do we pass laws that people won't obey?

Thank you, Mr. Chairman.

[The prepared statement of Mr. Hansen follows:]

TESTIMONY BY THE HONORABLE JAMES V. HANSEN
BEFORE THE
SUBCOMMITTEE ON TRANSPORTATION, AVIATION AND MATERIALS
OF THE COMMITTEE ON SCIENCE AND TECHNOLOGY
FEBRUARY, 21, 1985

MR. CHAIRMAN, I WANT TO COMMEND YOU FOR HOLDING HEARINGS TO DISCUSS THE MERITS OF A NATIONAL MANDATORY 55 MPH SPEED LIMIT. THIS IS AN ISSUE WHOSE TIME IS RIPE FOR CHALLENGE, AND I'M PLEASED TO BE ABLE TO PARTICIPATE IN TODAY'S DEBATE.

LATE IN 1973, THE ORGANIZATION OF PETROLEUM EXPORTING COUNTRIES EMBARGOED OIL EXPORTS IN THE UNITED STATES, TRIGGERING A SERIES OF EVENTS THAT AFFECTED THE ENTIRE AMERICAN POPULATION. ONE OF THE FIRST, SHORT DURATION EFFECTS, WAS THE LONG LINES OF AUTOMOBILES AT SERVICE STATIONS, WAITING SOMETIMES HOURS TO RECEIVE LIMITED AMOUNTS OF AVAILABLE GASOLINE. ANOTHER, STILL REMAINING IN EFFECT, WAS THE PASSAGE OF LEGISLATION CREATING A MANDATRY 55 MPH SPEED LIMIT.

FOR THE FIRST TIME SINCE WORLD WAR II, THE CONGRESS, IN 1974, IMPOSED A NATIONWIDE MAXIMUM SPEED LIMIT AS A FUEL CONSERVATION MEASURE. NOT SINCE PROHIBITION HAS CONGRESS ENACTED A MORE CONTROVERSIAL LAW. SINCE THEN, WHEN THE TEMPORARY 55 MPH SPEED LIMIT WAS MADE PERMANENT, WE HAVE BEEN SHACKLED WITH A LAW THAT MORE AND MORE HAS COME UNDER ATTACK AND IS INCREASINGLY DISOBEYED.

THE RECENT REPORT OF THE NATIONAL RESEARCH COUNCIL ON THE 55 MPH SPEED LIMIT CONCLUDED THAT "MORE THAN ONE HALF OF ALL DRIVERS ON ROADS POSTED AT 55 MPH EXCEEDED THE SPEED LIMIT IN 37 STATES, UP FROM 30 STATES IN 1982," AND "LEGISLATURES IN SEVERAL STATES HAVE PASSED MEASURES TO DEEMPHASIZE THE IMPORTANCE OF THE 55 MPH SPEED LIMIT." THE COUNCIL GOES ON TO STATE THAT THE "LAW IS NEARING A BREAKING POINT AND THAT ACTION SHOULD BE TAKEN NOW TO PRESERVE ITS MOST EFFECTIVE PARTS BEFORE THE LAW AS A WHOLE HAS BEEN IRREPARABLY WEAKENED BY PUBLIC CRITICISM AND WIDESPREAD LACK OF COMPLIANCE." I COULD NOT AGREE MORE WITH THE COUNCIL. IN MY OPINION, MR. CHAIRMAN, ANY LAW THAT THE PUBLIC UNIFORMLY THUMBS ITS COLLECTIVE NOSE AT SHOULD BE REEXAMINED.

LET ME SAY THAT I DO NOT OBJECT TO THE 55 MPH SPEED LIMIT. IT'S DONE OUR COUNTRY A LOT OF GOOD. IMPOSED AS A NATIONAL RESPONSE TO A NATIONAL PROBLEM, IT SAVED THOUSANDS OF BARRELS OF MOTOR FUEL DAILY AT A TIME WHEN FUEL CONSERVATION WAS NECESSARY. HOWEVER, THE ENERGY CRISIS WAS 10 YEARS AGO! YET, WE ARE STILL SADDLED WITH A MANDATORY "DOUBLE NICKEL" SPEED LIMIT!

CONTRARY TO THE LAW'S ORIGINAL PURPOSE, ITS MOST PERSUASIVE DEFENSE IS HIGHWAY SAFETY. LOWER HIGHWAY SPEEDS SAVE LIVES. BUT WHAT ELSE MAKES OUR HIGHWAYS SAFE? INCREASED SEAT BELT USAGE, IMPROVED EMERGENCY SERVICES, AND WELL DESIGNED HIGHWAYS AND CARS HAVE ALL CONTRIBUTED TO FEWER TRAFFIC FATALITIES AND ACCIDENTS. AND WHAT ABOUT THE PUBLIC ATTENTION THAT'S BEEN FOCUSED ON DRUNK DRIVERS? ALCOHOL HAS ALWAYS BEEN THE LEADING CAUSE OF TRAFFIC FATALITIES, WHILE EXCESSIVE SPEEDS RANK MUCH LOWER. THE CURRENT ADMINISTRATION'S DEDICATION TO

GETTING THE DRUNK DRIVER OFF THE ROAD HAS RADICALLY IMPROVED THE HIGHWAY SAFETY ENVIRONMENT. WE ALSO HAVE INTERSTATES AND OTHER FREEWAYS THAT WERE DESIGNED AND BUILT FOR SAFE TRAVEL AND SUBSTANTIALLY HIGHER SPEEDS. THESE ROADS WERE CONSTRUCTED WITH TURN RADIUSES, BANKS, LANE WIDTH STANDARDS, ETC., ALL SPECIFIED FOR 70 MILES PER HOUR TRAFFIC.

BUT HOW FAST IS TOO FAST? HOW SLOW IS TOO SLOW? IF SAFETY WERE THE ONLY CONSIDERATION, REDUCE THE SPEED LIMIT TO 45. OR HOW ABOUT 35! OUR HIGHWAYS WOULD BE SAFER. HOW ABOUT BARRICADING THE HIGHWAYS ALTOGETHER? THEN THERE WOULDN'T BE ANY DEATHS! THAT WOULD BE ABSURD. IT'S ALSO ABSURD TO HAVE A MANDATORY UNIFORM SPEED LIMIT.

DRIVING CONDITIONS ACROSS THE COUNTRY VARY, SO WHY CAN'T SPEED LIMITS VARY? IN MANY PARTS OF THE WEST FOR EXAMPLE, YOU CAN DRIVE FOR HUNDREDS OF MILES WITH NO METROPOLITAN BY-PASSES AND VIRTUALLY NO ROAD CURVES OR INCLINES. THESE ROADS WERE BUILT WITH HIGHER SPEEDS IN MIND. YET MOTORISTS ARE EXPECTED TO JUST MOSEY ALONG, DRIVING 55 MILES PER HOUR, BECAUSE THEY HAVE BEEN FORCED TO COMPLY WITH AN OUTDATED AND MANDATORY UNIFORM SPEED LIMIT. IS IT FAIR TO IMPOSE THE SAME SPEED LIMIT ON THE CONGESTED ROADS OF NEW JERSEY OR NEW YORK, FOR EXAMPLE, THAT ARE BEING FORCED ON THE FLAT DESERTED STRETCHES OF HIGHWAYS IN THE WEST WHERE THE ONLY FORM OF LIFE ONE IS APT TO SEE IS AN OCCASIONAL JACK RABBIT? IS IT FAIR TO FORCE THE ENTIRE COUNTRY TO DRIVE 55 MPH JUST BECAUSE SOME IN CONGRESS FAIL TO POSSESS REGIONAL VISION AND CAN'T SEE PAST THE END OF THEIR OWN COUNTY LINES?

MR. CHAIRMAN, WE'VE HEARD THESE SAME ARGUMENTS OVER AND OVER AGAIN. I SAY LET'S CUT THE CHUCK WAGON CHATTER AND TAKE A COMMON SENSE APPROACH TO THE PROBLEM BEFORE, AS THE NATIONAL RESEARCH COUNCIL WARNS US, "WE REACH A BREAKING POINT."

I HAVE INTRODUCED LEGISLATION THAT WILL DO JUST THAT.

ACCORDING TO THE FEDERAL HIGHWAY ADMINISTRATION, WE HAVE MORE THAN 3.8 MILLION MILES OF PUBLIC ROADS THAT ARE INEXTRICABLY LINKED TO SPEED LIMIT RESTRICTIONS. BECAUSE OF THE FEDERAL GOVERNMENT'S INVOLVEMENT IN OUR HIGHWAY SYSTEM, I BELIEVE IT IS IMPOSSIBLE TO COMPLETELY DIVORCE THE GOVERNMENT FROM TOTAL CONTROL OVER OUR PUBLIC ROADS. I PROPOSE, THEREFORE, THAT THE SECRETARY OF TRANSPORTATION DEFINE CONGESTED AND NON-CONGESTED AREAS OF OUR PUBLIC HIGHWAYS, USING SUCH CRITERIA AS POPULATION AND TRAFFIC COUNT, ACCIDENT STATISTICS, ROAD CONDITIONS, THE NUMBER OF EXIT AND ENTRANCE RAMPS, THE CONTOUR OF THE ROAD, AND SO FORTH. WITHIN THESE NATIONAL PARAMETERS, EACH STATE WILL THEN HAVE THE OPTION OF RAISING THE SPEED LIMIT TO A MAXIMUM OF 70 MILES PER HOUR. GIVEN A STRICT SET OF CRITERIA BY THE DEPARTMENT OF TRANSPORTATION, NOT ALL OF OUR 31,500 MILES OF RURAL INTERSTATE WOULD BE SUITABLE CANDIDATES FOR HIGHER SPEEDS, WHILE SOME NON-INTERSTATE FREEWAYS OR CONTROLLED-ACCESS HIGHWAYS, WITH SAFETY AND TRAVEL TIME CHARACTERISTICS SIMILAR TO THOSE OF RURAL INTERSTATES WOULD. THAT IS WHY I HAVE NOT LIMITED MY BILL TO PERMITTING HIGHER SPEEDS ON RURAL INTERSTATES ONLY. RATHER, MY BILL WILL ALLOW ANY PUBLIC ROAD IN AN AREA THAT MEETS NATIONAL CRITERIA OF NON-CONGESTED, TO BE CONSIDERED BY STATE LEGISLATURES OF SPEEDS UP TO 70 MILES PER HOUR.

IN PAST CONGRESSES, LEGISLATION CALLING FOR AN OUTRIGHT REPEAL OF THE 55 MPH SPEED LIMIT HAS BEEN INTRODUCED AND HAS FALLEN INTO A VACUUM. SOMETIMES, HOWEVER, LEGISLATION IS INTRODUCED WHICH STRIKES THE TRUTH. I BELIEVE MY BILL, WHICH ALLOWS THE FEDERAL GOVERNMENT AND STATES TO WORK TOGETHER TO DECIDE WHAT SPEED LIMIT IS SAFEST FOR ITS PEOPLE IS A SENSIBLE APPROACH, PROVIDING A RATIONAL, BALANCED AND WORKABLE SOLUTION TO A NATIONAL PROBLEM. IT CAN BE ENDORSED BY THOSE WHO CONTINUE TO SUPPORT A 55 MPH SPEED LIMIT AS WELL AS THOSE WHO WANT IT CHANGED.

Mr. **GLICKMAN**. Mr. Hansen, we appreciate your candor and your honesty, and your proneness to take risks as well. [Laughter.]

Very good testimony.

There are two members of the committee that asked to testify. One is Mr. McCurdy and one is Mr. Walker. I would like to give them the opportunity to testify, and then we really need to move to these witnesses because their testimony is fairly extensive.

You can go down there, Dave and Bob. You can either go down there or stay up here, whatever your pleasure.

Our colleague Dave McCurdy, who I know has introduced legislation which I think parallels or is the same legislation that Mr. Richardson referred to.

STATEMENT OF HON. DAVE McCURDY, A MEMBER OF CONGRESS FROM THE STATE OF OKLAHOMA

Mr. **McCURDY**. That's correct. Mr. Richardson cosponsored the bill that I introduced, Mr. Chairman, as did a number of members on this subcommittee and the full committee.

I just ask permission to submit a written statement for the record——

Mr. **GLICKMAN**. It will be included in the record.

Mr. **McCURDY** [continuing]. And would like just to make a couple of comments about some of the statements that my colleagues made earlier this morning. I support generally the statements of all of my colleagues that have appeared this morning.

I think those of us that represent large rural States share a like concern, and that is that this is probably the most abused law in the United States today. It is not being followed. Statistics show that nearly 80 percent of the American public is abusing it. They are not following it. They are driving over 67 miles per hour as an average on rural interstate highways, and this is the thrust of my legislation, is to address solely rural interstate highways and allow the States, through the Governors, to apply to the Secretary of Transportation for a waiver for their State to increase their speed limit according to whatever findings the State has as to safety and to what standards they believe are safe, to a maximum of 65 miles per hour.

Now I know my friend Mr. Walker is a collector of Corvettes. He may want it at a higher speed but I think he understands the political realities that we face in this country today. Unlike some who have testified today who would like to see it at 70, I'm sure there are some that would like to see an unlimited speed limit. I happen to disagree. I don't believe we can achieve the consensus in Congress to have an unlimited speed limit or to even go to 70, so mine is basically a bill that I feel is bringing together the best compromise of the people that I have discussed this issue with, and I think we have a very good opportunity to enact it.

I recently held town hall meetings in my district, as Mr. Richardson indicated. In 3 days we traveled over 700 miles just to make 25 towns, and I was on time, so I am not known as "the late Mr. McCurdy" but I'm not going to tell you how fast I drove, either, unlike Jim Hansen, my friend.

I think it is apparent to all of us in the rural areas that many rural State highways are unsafe at 55, and I know unsafe at higher speeds, so what my legislation is addressing is those rural interstate highways that are up to Federal standards and conditions of roadwork and safety, and I think this is perhaps the best compromise.

I would recommend and welcome any comments and suggestions from my colleagues on the committee and the subcommittee as to how to address this issue. But I can assure you that there is a strong, strong feeling in the West and in the South and Southwest, in the large, open areas, that the Federal Government is not setting a standard that is fair to those of us in those open areas and that we believe it's time to allow the States to make this decision and determination, based on the conditions that we face, and that by working with the Department of Transportation that we can not only continue a high record of safety but also have an impact on the overall economy and, I think, the general welfare of the people in such States as mine, in Oklahoma.

I appreciate the courage of the chairman to take this issue on because it's not always popular in our States. We have some people that have a knee jerk reaction or an ephemeral reaction and say, "No, we don't like that. That's not the way to do it. You're going to kill people," or whatever.

I hope that we can get away from the immediate reactions and look at the facts and the statistics. I think the report from the Research Board was probably as well done as any document that I have seen that has come before our committee. I think it is based on statistics and facts and gets away from the reaction, and I hope that we can use that as a basis. I think they invite Congress, literally invite the Congress to change the law. Now when you have a group of renowned scientists that are making this statement, I think that's something that we should consider.

Again, I thank the chairman for his efforts and his leadership, and look forward to working with him in the coming session.

[The prepared statement of Mr. McCurdy follows:]

Opening Statement
Honorable Dave McCurdy (D-Ok)
Subcommittee on Transportation, Aviation and Materials
Committee on Science and Technology
Hearing on the 55 mph Speed Limit
February 21, 1985

I thank the chairman for the opportunity to participate in these hearings and commend him on his decision to address this issue

Like many western states, Oklahoma has hundreds of miles of Interstate highway that cut across wide open rural areas. Interstates 40 and 44 through my district are major passages to the far western states. These Interstates carry traffic once handled by old, narrow U.S. and state highways. They provide improved road surfaces, multiple lanes, wide medians, controlled accesses, and better shoulder conditions and grades. I-40 and 44, typical of the U.S. Interstate system, were designed according to strict federal standards to carry vehicles traveling up to 70 miles per hour.

Through these hearings, I hope we will consider the reasons why rural Interstates should be exempted from 55 mph. With a maximum speed of 55 on these remote stretches, residents of rural areas and travelers who depend on the Interstate system for their livelihood are strapped with a needless additional time burden.

The 55 mph speed limit is easily the most abused law in the land. High non-compliance has led federal transportation authorities to threaten to cut off federal highway funds to many states. As a result, state police must spend an undue amount of time and personnel enforcing this statute.

"Fifty-five" has saved lives and energy. To ignore these and other benefits would be foolish. But, we should also consider the advances we have made in automotive and road technologies. We need a national policy that recognizes these factors as well.

I recently introduced legislation that would permit states to raise the maximum speed limit to 65 mph on rural Interstates where the Secretary of Transportation determines that highway safety will not be significantly adversely affected.

My bill, H.R. 693, allows the governor of each state to apply for the right to raise the speed limit. It sets up broad guidelines for the Secretary to use in deciding. It requires a report on such highways every five years to ensure that safety factors have not changed dramatically. It allows the Secretary to withdraw permission if conditions do change.

Past bills have sought to repeal the National Maximum Speed Limit on all highways. I seek to repeal it only on rural Interstates where the federal safety standards are high and the traffic count and fatality rates are low.

I look forward to the testimony of my colleagues, the Department of Transportation and others. I hope this hearing will facilitate prompt attention to this matter. Thank you.

Mr. **Glickman**. Thank you, Mr. McCurdy.

Before I get to Mr. Walker, I would just like to make the point, I don't want the rest of the world to think that this is just a western issue, because since I announced these hearings I have received several hundred letters from around the country, and I would say as many of the letters come from east of the Mississippi River as come from west of the Mississippi River.

Mr. **McCurdy**. If you drive through Tennessee, you drive from one end of the State to the other and it's over 400 miles of interstate highway, and you maybe hit one stop light or one urban area in the entire trip. You can cross my State, 250 miles, and not have a stop light. You can go from Fort Smith, AK to Amarillo, TX and beyond, all the way out to where Harry is, and go through one urban area of Oklahoma City and not go through an intersection.

Again, people have a conception of the beltway of Washington, DC or the heavily-traveled corridors where you have five and six lanes of traffic and it's full and it's back-to-back and it is dangerous. But I'll tell you what, it may be more dangerous going 55 on those highways than it is at 65 because they're going to run over you, but that's something that the individual States should consider. We're talking about the open highways that are 4-lane highways, that have high safety standards, that were designed for 70 miles per hour, and I think we can continue to have a high degree of safety and at the same time face the realities of the 1980's.

Mr. **Glickman**. Thank you, Mr. McCurdy.

Now our friend from the Northeast, Mr. Walker from Pennsylvania. Bob, do you want to make your statement here? If you have a statement, it will be in the record in its entirety.

STATEMENT OF HON. ROBERT WALKER, A MEMBER OF CONGRESS FROM THE STATE OF PENNSYLVANIA

Mr. **Walker**. Thank you, Mr. Chairman. I don't have one, but just a couple of comments, if I may, Mr. Chairman.

I agree with you, there are many of us who are east of the Mississippi who also feel strongly that, at least on the rural interstates, that the present law makes no sense. I plead guilty to Mr. McCurdy's description of me as a sports car enthusiast. I am, but I plead not guilty to his idea that I might perhaps be in favor of unlimited speeds. I don't think that's probably practical in this country but I will say that what Congress has done on the issue of the 55-mile-per-hour speed limit just doesn't make sense for a number of reasons.

First of all, it was passed as an energy-saving measure. You would save the same amount of energy in this country if everyone would inflate their tires to the proper pressure as we do with the kind of 55-mile-per-hour speed limit that we now have in place, so as an energy-saving measure it leaves something to be desired when you compare it to what else could be done.

As a safety issue, there has been an awful lot of statistical evidence that has come forth depicting the time just prior to the 55-mile-per-hour speed limit and the time since. The problem is that most of that statistical evidence coming out of bureaucrats has ignored the fact that the statistical trend line on safety has been downward in number of deaths per million miles since 1925, that there has been almost a direct drop, and that the trend line since 1974 is no different than the overall trend line. If anything, if anything there have been some movements upward during this period of time, during the 55-mile-per-hour speed limit. It appears as though far more relevant to the whole issue of the number of deaths per million miles is the economic climate in the country, rather than anything that we do about adjusting that particular speed limit, and that one of the things that we need to look at is the fact that during recessions less people seem to die on the highways.

Now I don't think that anybody in the Congress is going to advocate that we plunge the Nation into recession to save lives on highways, but in fact as a national policy that seems to be more relevant if you look at the overall trend since 1975, so I think that the safety issue becomes a clear case of making statistics do whatever you want them to do with regard to the 55-mile-per-hour speed limit.

I think that what we need to do is provide an option, that Congress just doesn't make sense by mandating a certain thing and then not providing any options. What we need to do is provide an option. If it's the McCurdy option, if it's the Hansen option, somewhere along the line we need to provide the option. Why? Because I go back to what I said originally: What we're doing now doesn't make sense, and let me make just one point about why I don't think it makes sense.

If everyone who feels strongly about this issue were to make a decision to go out on the 4-lane highways and go side-by-side at 55 mile-per-hour out on the highways, it would cause such economic havoc in this country, it would cause such tempers to flare in this country, you would create such a scenario out there of people actually obeying the law, going side-by-side and holding up all the traffic behind them, that you would probably literally have a revolution on the highways. If everybody did literally what the law says that we are supposed to do, it would create just havoc on the highways in the country, particularly out on those rural interstates. I would suggest that when you get to that kind of a situation where we are mandating it as a Congress, we have mandated a law that makes no sense.

Thank you, Mr. Chairman.

Mr. GLICKMAN. Thank you.

Mr. MCCURDY. Mr. Chairman?

Mr. GLICKMAN. Yes?

Mr. MCCURDY. I'm sorry. If you would indulge me for just a minute, there was a statement that Mr. Walker made that I would like to support with some statistics. He indicated the safety. From 1975 to 1983—and this is from the State Department of Transportation in the State of Oklahoma—the number of deaths per million miles traveled decreased from 49 to 33, so someone might say, "Wait a minute. That means that during the time that the 55-mile-per-hour speed limit was enacted, that there was a decrease." But the important thing was that the actual speeds traveled during that time period increased to over 67 mile-per-hour, so they are contradictory. So what I'm saying is that the statistics do not prove that it's just a safety factor or that the decrease in speed has contributed solely to the saving of lives.

Mr. GLICKMAN. OK. Mr. Lujan, who is the ranking member, has asked to make a statement. I am very happy to have him here. After Mr. Lujan has finished, I would then ask our representative of the Department of Transportation, Mr. Phil Haseltine, to come up.

Mr. Lujan.

STATEMENT OF HON. MANUEL LUJAN, A MEMBER OF CONGRESS FROM THE STATE OF NEW MEXICO

Mr. LUJAN. Thank you very much, Mr. Chairman.

I oppose the 55-mile-per-hour speed limit also because it doesn't really make any sense. No one observes the law. I am not going to confess as my colleagues have done but I have tried on many occasions to set my cruise control at 55, and I am the slowest one on the highway.

I have joined with Mr. McCurdy on cosponsoring his 65 mile-per-hour speed limit, simply because that's one way to indicate that I'm opposed to the 55-mile-per-hour speed limit, but I really believe that we ought to go back to the States controlling their own speed limits as we used to have before. I have a specific objection to the Federal Government holding a club over the States.

Anyway, everybody plays around with statistics. As it is, States, many States will give you a ticket for going over 55 miles per hour but will not enter it into the record. It doesn't go against your driving record until it gets over 70 miles per hour, so you are just kind of playing with it. It's just like with Prohibition, you're not going to make it work because people are not going to observe it. Even law enforcement officers recognize the fact that it's not an enforceable thing and it's not a proper law, and in most cases won't give you a ticket if you're going under 60 miles per hour.

So I think the time has come to repeal this law in its entirety and, as I say, I have only joined Mr. McCurdy because I think that's a way to express opposition to the 55-mile-per-hour limit but even that I would be opposed to. I believe that we ought to repeal the entire law, Mr. Chairman.

Mr. GLICKMAN. Thank you, Mr. Lujan.

I appreciate the testimony of all of our colleagues. After we hear the testimony today, we may want to get together—Mr. McCurdy and some of the others of us—and talk about what legislative options are available because this committee has limited legislative jurisdiction in the area, but we can perhaps serve as a focal point for legislative action because we will have done more in terms of a hearing record than anybody else in Congress.

Now I would like to welcome Mr. Phil Haseltine, Deputy Assistant Secretary for Policy for the Department of Transportation. I appreciate your coming down here today to talk about this. Your statement is not very long, so you may choose to read it or summarize it at your pleasure.

STATEMENT OF PHILIP W. HASELTINE, DEPUTY ASSISTANT SECRETARY FOR POLICY AND INTERNATIONAL AFFAIRS, U.S. DEPARTMENT OF TRANSPORTATION, ACCOMPANIED BY JOHN P. EICHER, DIRECTOR, OFFICE OF TRAFFIC OPERATIONS, FEDERAL HIGHWAY ADMINISTRATION

Mr. Haseltine. Thank you, Mr. Chairman, members of the subcommittee.

I appreciate the opportunity indeed to testify before you today on the National Academy of Sciences' study on the costs and the benefits of the national 55-mile-per-hour speed limit. I am Phil Haseltine, Deputy Assistant Secretary for Policy and International Affairs at DOT. Again, thank you for permitting us the opportunity.

I believe the results of this study indeed, let me say initially, fulfill the purposes outlined by the Congress in the Surface Transportation Assistance Act of 1982, which in fact mandated that precise study. The committee established by the National Academy of Sciences should be commended for doing its job well and for providing a useful service to Government decisionmakers. It is far and away the most complete appraisal of the 55-mile-per-hour speed limit since it was enacted in 1974, and it must be considered in any future discussion of speed limits. The Department of Transportation is actively considering the study's findings, but frankly we are not yet prepared to respond to its recommendations.

At the outset, however, let me say that the Department agrees with the essential finding of the study that the 55-mile-per-hour speed limit has indeed saved thousands of lives each year. The study illuminates the relationship between speed and the frequency and severity of crashes. Higher speeds allow less time for drivers to react, particularly on roads with limited sight lines; increased braking distances make the vehicle harder to control; they lead to higher impact speeds. As the speed at impact increases, the crash severity increases with the square of the speed, so an increase of only a few miles per hour in a crash can dramatically increase the risk to the vehicle's occupants.

The relationships between speed and crash severity and frequency have long been known to those concerned with highway safety. Campaigns against speeding have been waged since the earliest days of the automobile, but it was the 55-mile-per-hour speed limit with its immediate and nationwide effect on fatalities and injuries that really brought the point home for the American public. Other factors, such as reduced travel and the economic downturn in 1974, also contributed to the effect, but the study concludes that reduced speeds and the smaller speed variance were key factors in the decline in highway deaths.

The study estimates that the speed limit saved from 3,000 to 5,000 lives a year in the early years and from 2,000 to 4,000 lives a year thereafter. It predicts that savings will continue into the future. The awareness of this benefit probably accounts for the continued high level of public support for the 55-mile-per-hour speed limit which is described in the study and which has been mentioned earlier here today.

However, we are also concerned that level of support for the 55-mile-per-hour speed limit varies widely among the regions of the country and among different population groups. Observance of the speed limit on the road does not always match the expression of public support in the polls. The level of enforcement also varies from area to area, perhaps in recognition of different levels of public acceptance. Differing approaches to enforcement can lead to cynicism about the law, a development that we must work to prevent.

The National Academy of Sciences' study recommended that the 55-mile-per-hour speed limit be retained, but the members of the committee were divided on whether the speed limit should remain intact on all roads. Some favored increasing the speed limit on selected roads such as rural interstates, while others pointed out that to do so would cost up to 500 lives per year, and would consider increasing the speed limit only if other safety measures were implemented to offset the effects of higher speeds. I think that's a key point, Mr. Chairman. The committee's report leaves this issue unresolved, however.

The committee also raised questions about the appropriate method for measuring the State's compliance with the speed limit, and recommended that the Department consider a method other than the straight calculation of the percentage of motorists exceeding 55. It was the committee's view that this method counts all violations as being equal and therefore fails to take into account widespread tolerance of minor violations and does not encourage sufficient enforcement attention to the more serious violations.

Within the Department we have set in motion an intensive effort to review the committee's findings and recommendations and to develop appropriate policy options. Potential options range from keeping the 55-mile-per-hour speed limit intact on all roads, an option reflecting the generally high level of support in public opinion polls for 55, to allowing a higher speed limit on certain roads based on the characteristics of those roads, such as the rural interstate highways mentioned in this study.

Other options might include allowing higher speed limits on certain roads in States that take other safety measures, such as increased enforcement or the enactment of safety belt usage laws, to offset the effect of higher speeds. The options could also include adjustments in measuring compliance to place more emphasis on serious speed violations, as recommended by the National Academy's study.

We are examining the pros and the cons, as well as the benefits and the costs, of each of these potential actions. When we complete our work, which we intend to do very promptly, the Secretary will have a framework within which to respond to the National Academy of Sciences' report. If her decision requires administrative or legislative changes, we will certainly advise the Congress. We will work closely with the appropriate congressional committees, your own committee and the other committees who have an interest in this issue, to implement them.

Mr. Chairman, this completes my prepared testimony. If you have any questions I would be most happy to field them.

[The prepared statement of Mr. Haseltine follows:]

TESTIMONY OF PHILIP W. HASELTINE
DEPUTY ASSISTANT SECRETARY, U.S. DEPARTMENT OF TRANSPORTATION
BEFORE THE TRANSPORTATION, AVIATION AND MATERIALS SUBCOMMITTEE
OF THE HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY

February 21, 1985

Mr. Chairman and Members of the Subcommittee:

I appreciate the opportunity to testify today on the National Academy of Science's study of the costs and benefits of the national 55 mile per hour speed limit. I am Philip Haseltine, Deputy Assistant Secretary of Transportation for Policy and International Affairs.

I believe the results of the study fulfill the purposes outlined by Congress in the Surface Transportation Assistance Act of 1982. The committee established by the National Academy of Sciences should be commended for doing its job well and for providing a useful service to government decision-makers. It is far and away the most complete appraisal since the 55-mph speed limit was enacted in 1974, and must be considered in any future discussion of speed limits. The Department of Transportation is actively considering the study's findings, but is not yet prepared to respond to its recommendations.

At the outset, let me state that the Department agrees with the essential finding of the study that the 55-mph speed limit has saved thousands of lives each year. The study illuminates the relationship between speed and the frequency and severity of crashes: higher speeds allow less time for drivers to react, particularly on roads with limited sight lines; they increase braking distances and make the vehicle harder to control; and they lead to higher impact speeds. As the speed at impact increases, the crash severity increases with the square of the speed, so that an increase of only a few miles per hour can dramatically increase the risk to vehicle occupants.

The relationships between speed and crash severity and frequency have long been known to those concerned with highway safety. Campaigns against speeding have been waged since the earliest days of the automobile. But it was the 55-mph speed limit, with its immediate and nationwide effect on fatalities and injuries, that really brought the point home for the American public. Other factors, such as reduced travel and the economic downturn in 1974, also contributed to the effect, but the study concludes that the reduced speeds and the smaller speed variance were key factors in the decline in highway deaths. The study estimates that the speed limit saved from 3,000 to 5,000 lives a year in the early years, and from 2,000 to 4,000 lives a year thereafter. It predicts that savings will continue into the future. The awareness of this benefit probably accounts for the continued high level of public support for the 55-mph limit which is described in the study.

However, we are also concerned that the level of support for the 55-mph limit varies widely among the regions of the country and among different population groups. Observance of the speed limit on the road does not always match the expression of public support in polls. The level of enforcement also varies from area to area, perhaps in recognition of the different levels of public acceptance. Differing approaches to enforcement can lead to cynicism about the law, a development that we must work to prevent.

The NAS study recommended that the 55-mph limit be retained, but the members of the committee were divided on whether the speed limit should remain intact on all roads. Some favored increasing the limit on selected roads, such as rural Interstates, while others pointed out that to do so could cost up to 500 lives and would consider increasing the limit only if other safety measures were implemented to offset the effects of higher speeds. The committee's report leaves this issue unresolved.

The committee also raised questions about the appropriate method for measuring a State's compliance with the speed limit, and recommended that the Department consider a method other than the straight calculation of the percentage of motorists exceeding 55. It was the committee's view that this method counts all violations as being equal and therefore fails to take into account widespread tolerance of minor violations and does not encourage sufficient enforcement attention to the more serious violations.

Within the Department, we have set in motion an intensive effort to review the Committee's findings and recommendations and to develop appropriate policy options. The potential options range from keeping the 55-mph limit intact on all roads, an option reflecting the generally high level of support in public opinion polls for 55, to allowing a higher limit on certain roads, based on the characteristics of those roads, such as the rural Interstate highways mentioned in the study. Other options might include allowing higher speeds on certain roads in States that take other safety measures, such as increased enforcement or the enactment of safety belt use laws, to offset the effect of the higher speeds. The options could also include adjustments in the method of measuring compliance to place more emphasis on serious speed violations, as recommended by the NAS study. We are examining the pros and cons, as well as the benefits and costs, of each potential action.

When we complete our work, which we intend to do promptly, the Secretary will have a framework within which to respond to the NAS report. If her decision requires administrative or legislative changes, we will so advise the Congress and will work closely with the appropriate Congressional committees to implement them.

This completes my prepared testimony. If you have questions, I would be glad to answer them.

Mr. GLICKMAN. Thank you. I appreciate your statement.

On page 3 of your statement you indicate, "Others point out that to increase the speed limit, even on rural interstates, might jeopardize lives," but you imply that there would be a quid pro quo as a part of that—perhaps, as I have heard, mandating mandatory seatbelt laws. Are you contemplating as one of your options letting the States raise the speed limit, with the quid pro quo being a mandatory seatbelt law?

Mr. HASELTINE. That, Mr. Chairman, is an option that we are actively exploring.

Mr. GLICKMAN. OK. At this stage would you have any characterization of which options you are exploring are more realistic than others?

Mr. HASELTINE. I think not, beyond agreeing with the statements of some of the committee members and the prior witnesses that to completely abolish the 55-mile-per-hour speed limit I don't think is a realistic option politically. I don't think that's an option that would be viewed as acceptable within the Congress or perhaps among the American people.

Aside from that, we are totally uncommitted to any of the options that I have laid out in the paper, but certainly are actively exploring whether to keep it intact or whether to support an option such as suggested by Mr. McCurdy in his bill or one of the other bills, and the other options dealing with enforcement and mandatory belt use laws as well.

In addition to those options, we are also actively looking—and we think it's important—at the issue of the whole way in which we measure compliance. The fact is, Mr. Chairman, as you well know, a car that's traveling right now at 56 miles per hour in terms of compliance or noncompliance is treated exactly the same way as a car that's traveling at 76 miles per hour. The Academy pointed that out during the course of this study, and that too is an option that can be in addition to the other things that we are exploring, that we are looking at very seriously.

Mr. GLICKMAN. But I want to make sure that you are sensitive to the issues raised by my colleagues here about the nature of rural interstates and the fact that even the National Academy in their book, in their study, seemed to indicate that there was some uniqueness about those roads which should require some flexibility on the part of the Federal Government.

Mr. HASELTINE. Yes, sir. We are sensitive to that. I come from the Midwest, from the State of Michigan, which has a wide diversity of heavily populated areas and stretches of roads that look very much like you see in your State. We are familiar with that. We are sensitive to that. We, too, get letters. I think as we look at that issue we are also taking in mind the fact that varying segments of our interstate system, some are quite old, are reaching maturity. We are spending a great deal of funds or the States are spending a great deal of funds to upgrade and repair the interstate system. Some of the older segments of interstates, even some of the older rural ones, are not built to the same design standards as those most recently constructed roads are.

So as we look at a potential mechanism to raise the speed limits on some roads, those factors too have to be taken into consideration. Even among interstates, there are differences in design characteristics, therefore differences in the degree of safety afforded and forgiveness afforded by the roadway itself.

Mr. **Glickman**. My final question is a philosophical one. I kind of detect a very pragmatic attitude on your part and the Secretary's part on this issue. I think I recall that this issue was raised in one of the earlier Republican Party platforms——

Mr. **Haseltine**. That's right. It was in 1980.

Mr. **Glickman** [continuing]. And in addition there is kind of a philosophical States rights issue as to who should control safety issues. I think the energy issues, or those safety issues which are of such paramount national significance that they can't be handled on a State-by-State basis, are appropriate for the Federal Government to get into, but it does seem to me that the speed limits, particularly on large segments of rural interstates, are of such nature that philosophically they ought to be within the State's prerogative and not the Federal Government's prerogative. And yet I'm reminded of former Senator Dirksen, who was of course known as a great conservative, and all of a sudden he plopped a big water project down in the middle of an appropriations bill and one of his colleagues said, "Everett, I don't understand this. I thought you were a man of principle." He said, "I am, and my first principle is flexibility."

What I am gathering here is, there is a lot of flexibility in a position where I thought this administration was perhaps a little more philosophical and ideological on the issue of States rights. I thought you might comment on that.

Mr. **Haseltine**. Philosophically we certainly are. In terms of how we implement that philosophy in the policy—Secretary Dole's priority and the President's, too, as demonstrated through the Presidential Commission on Drunk Driving and the support he gave to legislation encouraging States to adopt 21-year-old drinking ages last year—when it comes to implementing that general philosophy and the policy, when we're talking about human lives and the safety of the American public and remembering that traffic crashes are the largest single cause of death of all Americans up to—what, age 35 or something like that?—don't quote me on the number—we have basically a tradeoff situation.

I don't think we're talking—we're talking flexibility in one context but we're talking about how to best implement a philosophy but to implement it in a way that does not have a devastating effect, a life-and-death effect, on the American people. Looking at this issue specifically, Mr. Chairman, we are going to have to weigh—first of all, we are going to have to determine—and we are in the process of doing that—whether we agree with the National Academy's statement that even raising the limit to 65 on some rural interstates could cause 500 additional fatalities per year. If we agree with that number, then we have to weigh that against philosophy.

Our general philosophy within the Department, and it's one with which the President has concurred right down the line, is that we deregulate, we get Government out of people's business in every possible way that we can, except when it comes to the safety of the American traveling public, and we continue to support legislation and regulation which is reasonable and which is appropriate but which is vital to the safety of the American people.

Those are the tradeoff issues, and it's not a clear-cut issue. That's frankly one of the reasons, as we sort out policy and philosophy, along with going through a rather complex study that took the Academy 18 months to produce and trying to come up with a policy position, and that's why we don't have one for you yet today, because it is complex and there are a lot of sides to the issue.

Mr. GLICKMAN. Thank you.

Let's see. Mr. Lewis, and I am going to ask members to stick, if possible, by the 5-minute rule in their questions, as I have done.

Mr. LEWIS. Thank you, Mr. Chairman.

Mr. Haseltine, I find the National Academy of Sciences committee report very interesting, but I would like for you to comment on the drop in fatalities that we have seen since 1974, but if you take a look at the average speed as indicated by Mr. McCurdy of Oklahoma in his State and a number of other States, the average speed traveled on these highways is 7 to 12 miles-per-hour above the 55-mile-per-hour speed limit, and fatalities are still down. They are dropping, so to speak, so why do you say only consider raising unless safety measures are taken or enforced? Wouldn't this be an indicator that certain highways are safe at these speeds?

Mr. HASELTINE. Certainly certain highways are more safe at these speeds than are other highways, but as we look at the fatality reduction since 1974, please don't get the impression that we are trying to attribute them solely to the 55-mile-per-hour speed limit. We very much are not. I have worked in traffic safety for 15 years, and throughout that experience we have found that there are no silver bullets. There are no single actions that we can take to solve this highway safety problem that we have in this Nation.

Fatalities have dropped, in part because of the 55-mile-per-hour speed limit, we are convinced. The data show that and we are fairly confident that the data are generally accurate. They have dropped in part because we are paying attention to drunk driving, as Representative Hansen indicated earlier. People are drinking and driving less; laws are tougher; people's attitudes towards drinking and driving are changing.

We are seeing more people wearing safety belts and buckling up. NHTSA Administrator Diane Steed is, I think at this moment, testifying before a Senate committee, and we find that I believe the belt usage rate is up to close to 20 percent now in this Nation. That's several percentage points higher. More people are buckling up.

Our roadways are constructed safer, both the interstates and the reconstruction we are doing in urban areas as well. They are more forgiving; there are fewer fixed objects. We have the sand barrels, the impact-attenuating devices. We have safer motor vehicles. There have been vast improvements in motor vehicle design over the last decade, decade and a half, as well.

All of these things are contributing to the decline in fatalities but, again, there are basic laws of physics dealing with speed and the square of speed in the impact of moving objects. Clearly the 55-mile-per-hour speed limit has contributed significantly to the fatality reductions we have seen since 1974.

Mr. Lewis. I am also curious as to why your study didn't allude specifically, as you just mentioned, to the drunk driving application. Now in a number of States throughout this country and in Florida in particular, in certain counties in Florida where the highway patrol had estimated certain numbers of fatalities, they had anywhere from zero to maybe less than 1 or 2 percent of the fatalities they anticipated because of strong law enforcement, particularly over this Christmas and New Year's holidays. I am wondering why your study didn't strongly point this out and allude to this as far as the reduction in fatalities.

Mr. Haseltine. Again, the study was conducted by the National Academy of Sciences and a team of researchers. We had some involvement with that but it is their study. It is not a Department of Transportation study, so we had no control over the findings of the study. Indeed——

Mr. Lewis. But you had input.

Mr. Haseltine [continuing]. that would have been inappropriate. I mean, we're looking for an objective scientific study by scientists, by statisticians, not by policymakers like ourselves. The extent to which the change in drinking and driving attitudes, the strictness of new drunk driving laws, increased enforcement for drunk driving, the extent to which those were considered during the course of the study I do not know. I would be pleased to do some checking for you and respond for the record, or I believe we have a later witness from the Academy representing the study. Perhaps that witness could better answer the question.

Mr. Lewis. I would appreciate that.

My final question is, you are alluding to the law of physics and we all recognize that the bigger you are, the harder the smaller fellow falls. Did the study at all indicate the law of physics as far as the larger cars versus the smaller cars on the highways contributing to fatalities, rather than the 55-mile-per-hour speed limit.

Mr. Haseltine. I'm not sure whether the study recognized that, but we certainly recognize that. As the vehicle mix changes, as we look at the options, explore the options that I laid out in my testimony, among the things that we have to look at are a continuing change in the vehicle mix, the trend toward smaller cars on one end and toward larger trucks on the other end of the spectrum; changes in the driver population, where the driver population at large in this country, as with the population at large, is becoming older, and older drivers have different characteristics. Their driving patterns change—a higher percentage of recreational travel. The continuing roadway improvements, anticipated changes in vehicle design, all of those things we are considering as we measure the options.

Again, the extent to which the study looked at the trend towards smaller cars I don't know, but that's a question you may want to ask the witness from the National Academy of Sciences.

Mr. Lewis. Thank you, Mr. Haseltine.

Thank you, Mr. Chairman.

Mr. Glickman. Thank you, Mr. Lewis.

Mr. Reid.

Mr. Reid. You have talked about this report that you are going to be completing. When will that be?

Mr. Haseltine. If I give you a date certain, we'll certainly miss it. Within the next few weeks.

Mr. Reid. You also indicated that one possibility might be the mandatory seat belt law. One of the questions I have always had is how possibly you would ever enforce that, or how anyone would enforce it.

Mr. Haseltine. There are now three and a half States, I guess, in this country—the three States that have mandatory belt use laws are the State of New York, New Jersey, Illinois, and the fourth one sits on the Governor's desk in Michigan awaiting his signature. He has indicated he will sign it. Two of those four actually do not permit enforcement for that particular offense, and that parallels the experience we have seen in other jurisdictions. In Canada most of the enforcement of seat belt laws is when a driver is pulled over for another offense.

Despite a relatively low level of enforcement—and perhaps the best example is in Great Britain, which has had a law since February 1, 1983, and with relatively minimal enforcement levels they are seeing still through last fall compliance levels, people actually wearing belts throughout Great Britain, in excess of 90 percent. I think, as with 55—perhaps the analogy isn't good—as with 55 or as with any law, the fact that it is public policy means that a certain sizeable segment of the population will obey that law.

I think even with 55, our traditional attitudes toward speed limits in general in this country is that if the speed limit is 35 and you're doing 40 or doing 39, folks feel they are in substantial compliance. They don't feel they are breaking the law. If they're driving 50 in a 30, they know they're breaking the law. But there is a certain and sizeable segment of the population that, because it is public policy, will in fact obey it. We have seen it in better than 30 foreign jurisdictions. Throughout Canada which has—several of the Canadian provinces have belt use laws—we are seeing belt use rates vary from 50 to as high as 75 percent.

Mr. Reid. What do they do, ask people if they——

Mr. Haseltine. No, these are observed usage studies, people standing on bridges or at intersections and actually counting cars. Ninety percent and higher usage rates in Great Britain, 50 to 75 percent in the Canadian provinces, in the 70 percent area in Australia, similar kinds of levels throughout many of the Western European countries. In many of those countries there is minimal enforcement.

Now in the State of New York, which has had a law in effect only since the first of January, they have already written more than 3,000 citations, so clearly in this country in the single, limited experience that we have—the New York law being the only one yet in effect—it has been demonstrated that such laws can be enforced.

Mr. Reid. It is my understanding that there are now reports indicating that some States are not in compliance and in danger of losing Federal funds for not maintaining the 55-mile-per-hour speed limit.

Mr. Haseltine. Within the last week we have sent letters to the Governors of the States of Arizona, Maryland, and Vermont, whose reporting data for the last year indicate——

Mr. REID. That's all I needed. I just wanted to make sure Nevada wasn't included.

Mr. HASELTINE. Those are the three States that we have sent letters to and will be negotiating with, having hearings with, exploring further the data that they submitted to us.

Mr. REID. I have no further questions, Mr. Chairman.

Mr. GLICKMAN. Thank you.

Just a followup on Mr. Reid's question: The loss of Federal funds is based upon the current methodology used to determine if a State is in compliance, and that is one of the reasons why you are looking at changing that methodology?

Mr. HASELTINE. Yes.

Mr. GLICKMAN. OK. Thank you.

Mr. Packard.

Mr. PACKARD. I hadn't intended to ask this question, but to follow up again, further, on the loss of State funds, is there any amount of Federal dollars going to States to enforce the 55-mile-per-hour speed limit?

Mr. HASELTINE. Yes, sir. I believe the figure is $20 million per year out of or as a part of the section 402 State and Community Highway Safety Grant funds going to the States, so the States are receiving from the Federal Government approximately $20 million per year for the purpose of enforcing the 55-mile-per-hour speed limit, enforcement and other activities related to enforcement.

Mr. PACKARD. Thank you. There might be some thought to considering withholding those funds instead of all State highway funds. That is an overkill, perhaps, using all State highway funds.

I was concerned a little bit about the statement that you made on page 3, that other options might be imposed to allow a different speed limit, a higher speed limit on rural interstates, and you elaborated on page 4 on some of those options, one being the seat belt, the mandatory seat belt. If that is a reasonable exchange, why would it not be wise to impose that irrespective of the speed limit? If it's going to save lives, are we exchanging lives for lives or looking to hold at a minimum death rate on the highways, or are we looking for ways to save lives under any circumstances?

Mr. HASELTINE. We would like to save lives, I won't say "under any circumstances" because obviously a policy—one can go overboard with policy decisions. I'm not sure exactly what the question——

Mr. PACKARD. Well, my question is, if imposing the seat belt law is good to save lives, why do we have to do it in exchange for a 55-mile-per-hour speed limit? Why wouldn't you recommend that irrespective of the speed?

Mr. HASELTINE. Oh, we are strongly recommending that irrespective.

Mr. PACKARD. Then it really is not an exchange or not a tradeoff. It is simply a proposal to try to—an additional way of saving lives.

Mr. HASELTINE. It is an additional way of saving lives. We are strongly supporting State efforts to enact belt use laws. Probably 35 State legislatures will be debating them this spring.

Mr. PACKARD. The question I really wanted to get into was, how do most States determine the speed limits on urban streets?

Mr. **Haseltine**. The speed limits on urban streets are—well, let me take two areas. In many jurisdictions in residential areas the norm is a 25-mile-per-hour speed limit. Speed limits other than 25 mile per hour in urban—excuse me, in residential sections—and aside from 55, most other speed limits are set based on the 85th percentile rule. The State or local highway or transportation or traffic jurisdiction actually takes measurements——

Mr. **Packard**. Correct.

Mr. **Haseltine** [continuing]. Of speeds traveled on the roadway, and speeds are normally set at the 85th percentile.

Mr. **Packard**. That's the way it is done——

Mr. **Haseltine**. That is an oversimplification——

Mr. **Packard**. Yes, I understand.

Mr. **Haseltine** [continuing]. But in general that is the way they are frequently set.

Mr. **Packard**. I think that's the way it's done in my State. Serving as a mayor, I recall that we determined speed limits in our urban areas based upon a percentile of what the average speeds were, and then it would usually come closest to 45 or 35 or the 25, with some exceptions of course to accommodate schoolchildren in certain proximities, business sections of the community, and what not.

If that principle were applied to our interstate, particularly our rural interstate highways, have there been any studies to determine what that figure would be?

Mr. **Haseltine**. Let me ask one of my technical support people, John Eicher from the Federal Highway Administration.

John, can we answer that?

Mr. **Eicher**. We don't have figures on the 85 percentile speeds right now on the interstates. I do have figures on rural interstates for 1984 which would indicate that 75.3 percent of the motorists whose speeds were monitored as part of the State speed monitoring program were exceeding 55.

Mr. **Packard**. Do you have a figure as to how much, the average excess of 55?

Mr. **Eicher**. Well, the average overall speed nationwide for fiscal year 1984 is 55.9. That is on all classes of highway.

Mr. **Packard**. Oh, well, that doesn't tell us anything. No, that doesn't tell us anything.

Mr. **Haseltine**. Can we come up with that data?

Mr. **Eicher**. Yes, we can.

[Material follows:]

What is meant by the "85th percentile" speed and how is it used?

Answer. That is the speed at or below which 85 percent of the traffic is moving. The 85th percentile speed is an objective factor used in establishing reasonable speed limits.

What is the 85th percentile speed on all highways with a 55 mph speed limit, and what is it for rural segments of the Interstate System?

Answer. During fiscal year 1984 the 85th percentile speed on all 55 mph highways was 62.7 miles per hour, up from 62.4 in 1983, and 62.2 in 1982.

On rural segments of the Interstate System, the 85th percentile speed in 1984 was 65.7 miles per hour, up from 65.2 in 1983 and 64.7 miles per hour in 1982.

Mr. **Haseltine**. Mr. Packard, we can come up with that data and supply it for the record, in the interest of time.

Mr. **Packard**. It would be very interesting to know if the principle we are expecting our cities to apply to speed limits—and, frankly, speed limits are a lifesaving issue, 45-mile-per-hour speed limits in urban areas, certain urban areas, as it is on our freeways—I think it would be helpful to know.

I do know this—and I won't take any longer—I do know this, that we are advised—I took a little trip to Florida over the Christmas holidays to see my brother—as a little exercise to make certain that I didn't miss anything of interest as I went through the different States getting there, I talked to my colleagues, and they didn't tell me where to stop and see and sightsee and so forth as we went through North and South Carolina and Georgia and into Florida. They said, "Well, you are allowed to go up to 62.5 miles per hour before you'll get a ticket," or up to 65 or 67. "If you go over that speed, you'll get nabbed."

Well, it was an interesting test as we went down. I did get a warning ticket because at one time I exceeded it by 1 mile an hour, what he told me I could be allowed, and it was of interest. So I would suspect that if there were no speed limits on a street or on a highway, it would be interesting to see what the average or the 85 percentile rule would indicate. It would probably approximate—well, certainly considerably over the 55, I would assume.

Yes?

Mr. **Haseltine**. Did you have another——

Mr. **Eicher**. If I could expand on your original question, we haven't as yet fully compiled all the figures for fiscal year 1984 that have come in from the States, but I do have some figures for fiscal year 1983 which would be a year old. The 85 percentile speed on all 55-mile-per-hour roads was 62.4 mile per hour. This is in fiscal year 1983. On rural interstates it was 65.2 miles per hour.

Mr. **Packard**. OK. That helps.

Mr. **Eicher**. That's a year old, and it will be about 2 weeks or so before we——

Mr. **Packard**. And there likely will be very little difference in 1985 records or 1984 records from 1983, I would assume.

Mr. **Eicher**. Up slightly, yes, sir.

Mr. **Packard**. That is of interest. Thank you very much.

That's all the questions.

Mr. **Reid** [acting chairman]. Mr. McCurdy.

Mr. **McCurdy**. Thank you, Mr. Reid.

Mr. Haseltine, I appreciate your comments and your statements. I think the last information provided I think is probably the most relevant that I have seen on rural interstate highways being 65.2 miles per hour at the 85 percentile, and I think that's consistent with the legislation I have introduced.

But I would like to ask the question, do you in the department when you are developing your statistics as per accident rate or deaths per million miles or whatever, do you take into consideration or do you separate as to weather conditions or whether or not alcohol was involved? How do you break it down? Is it broken down by age? Are there questions as to whether or not there was a child restraint used, which many States now have complied by having passed legislation for child restraints. The State of Oklahoma, in the legislature now there has been a bill introduced for mandatory seatbelt legislation. Whenever we look at these other conditions, I would like to know if there is a breakdown in taking these things into consideration.

Mr. Haseltine. Particularly with fatal accidents, because we have more in-depth data on fatals than we do on nonfatal crashes, within the fatal accident reporting system which is administered by NHTSA within the Department, we can give you breakdowns of crashes in I think all of the categories you mentioned, Congressman McCurdy. We can tell you child restraint usage. We can tell you dry streets, wet streets, day/night, age, alcohol/nonalcohol, belt use/not used, type of roadway. All of that information we have, and let us provide for the committee and for yourself copies of the most recent, which I believe 1983 is the most recent we have compiled, if 1983 is out. [See appendix.]

Mr. McCurdy. Well, I think that the——

Mr. Haseltine. It is part of the fatal accident reporting system, because it has those breakdowns for you.

Mr. McCurdy. I think that would be extremely helpful because it's obvious that under adverse weather conditions, 55 on rural interstate highways could be very foolish, and that in Oklahoma sometimes we get ice instead of snow and you can't even pass on them.

The point, I think, that we should make again is that it takes individual judgment by any driver to observe the conditions, whether it is day or night, the roadway, the weather conditions, and that the Federal Government can't set that standard; that by just setting a ceiling they are not providing for total safety, and that it is impossible for us to legislate judgment, good driving judgment. I think that's something that we should consider.

Just a point of reference: I understand that in the State of Colorado if you are picked up for a traffic violation on the interstates or in the rural areas, that you make out your check to the department of revenue. It's not the department of public safety; it's the department of revenue. I sometimes wonder if that is not a factor also.

Many in my State—and again I will just make this comment and stop with that—it's that we believe this is an oppressive Federal action and that the States should be given greater jurisdiction, and I think the States are making progress because they are passing the child restraint laws, they are increasing the driving age as they did in Oklahoma, and they are introducing such issues as mandatory seatbelt legislation. So I think the States are fully capable of addressing the national concerns on safety, and that we ought to leave it to the States and let us get back to the important things of dealing with the budget deficits and national defense and research and developing in science and technology.

I thank the gentleman for appearing.

Mr. Reid. There are no—oh, I'm sorry. I didn't remember you were here, Mr. Walker. Please go ahead.

Mr. Walker. Thank you, Mr. Chairman.

You know, the problem that we've got is that rhetorically it's hard to argue with the point that what we're trying to do is protect the safety of the American people. You know, when you come back to that kind of point then it makes it awfully hard sometimes to argue these subjects.

You know, let me give you a little bit of baseline here. I drive the single safest car available in the country. The car I drive most of the time last year crash tested as the safest car in the country, the Fiero. So, you know, I think that there are some things about safety that are probably important.

However, if that is in fact your baseline, then isn't it true that there is some speed on the highway which is completely safe?

Mr. **Haseltine**. Presumably.

Mr. **Walker**. Yes. One mile an hour is probably completely safe, isn't it? I mean, we wouldn't kill anybody if everyone drove 1 mile an hour. Ten miles an hour is probably completely safe, isn't it?

Mr. **McCurdy**. Not if you're on a rural interstate it's not, Bob. [Laughter.]

Mr. **Walker**. But I mean, you know, that we would lose doggone few lives if really we enforced a speed limit that was absolutely safe, so that when we use that kind of language it seems to me it becomes rather rhetorical language because I think that this administration would acknowledge, as nearly any rational person would acknowledge, that if we set a 1-mile-per-hour speed limit in Congress, that it would be absolutely absurd.

Now part of our argument is that a speed limit of 55 on many rural interstates is completely absurd, given where they are. Let me ask you this: How many fatalities are there on rural interstates per million miles driven as compared to the overall average?

Mr. **Haseltine**. I don't believe I have them but I'll provide them for the record.

[Material follows:]

When the 55 mph speed limit was enacted in 1974, what was the difference in the decline of fatalities on all highways as compared to the Interstate System?

Answer. After the 55 mph speed limit was enacted, fatalities declined by 15 percent on all highways. The reduction on the Interstate System was 32 percent.

Are there any differences in the fatality rate on rural Vs urban Interstates?

Answer. Both speeds and the fatality rate (based on 100 million miles of travel) are higher on rural Interstate highways than on urban interstate roads. The fatality and speed compliance information for 1981 and 1982 are as detailed:

	1981		1982	
	Rural	Urban	Rural	Urban
Fatality rate	1.81	1.37	1.50	1.24
Percent exceeding 55	68.7	54.1	73.7	55.1
Percent exceeding 65	9.3	4.5	14.2	6.8

Mr. **Walker**. But it's considerably lower than the overall average, isn't it?

Mr. **Haseltine**. Yes.

Mr. **Walker**. And it is because those roads are safe and were really designed for speeds of about 85 or 90 miles per hour. Isn't that true?

Mr. **Haseltine**. They are designed for high speeds. What exact speed they are designed for, I hear different numbers, but the fact is they are designed for high-speed driving.

Mr. **Walker**. And so they do their purpose. In fact, the statistics show that they are roads where those kinds of speeds can be maintained and can be done safely. The fact is that if you look at the fatalities on those interstate roads, is it not true that those fatalities have little or nothing to do with the speed being traveled, but they are mechanical failures and drunken driving for the most part? Isn't that true?

Mr. **Haseltine**. I would not agree with mechanical failures as being a major contributor to rural interstate fatalities. Drunken driving in all kinds of crashes is——

Mr. **Walker**. Well, I'm talking about blowouts, for example.

Mr. **Haseltine**. Probably a very small proportion of failures——

Mr. **Walker**. But you would agree with drunken driving?

Mr. **Haseltine**. Certainly.

Mr. **Walker**. So that, therefore, if you take a look at the fatalities, if you take a look at the actual safety record, the speed traveled on those highways—providing it is speed within the design capabilities of those highways—has little or nothing to do with the safety factor. Is that not true?

Mr. **Haseltine**. Where it does have to do with the safety factor is the outcome of a crash in the event that it does occur, what happens to the person or persons inside of the vehicles.

Mr. **Walker**. But if that's the case, then Mr. Packard's point about seatbelts and so becomes far more relevant to the bottom line. You know, I watched them at Daytona crash at speeds of 200 miles-per-hour and walk out alive. Now that's because the car, the design, the way in which they are strapped into the car makes all the difference in the world. Isn't that right? The speed doesn't make the difference there.

Mr. **Haseltine**. That's correct.

Mr. **Walker**. And so——

Mr. **Haseltine**. That's why we are exploring the option.

Mr. **Walker**. OK. Well, and I think that makes some degree of sense within your testimony, but the question here becomes why, then, do we continue to hang to this idea rhetorically that the 55-mile-per-hour speed limit is the thing which has great safety value to it? The fact is that the 55-mile-per-hour speed limit has safety value only insofar as you want to measure it that way. Isn't that right?

Mr. **Haseltine**. I'm not sure I could go so far as to agree with you. Clearly the 55-mile-per-hour—

Mr. **Walker**. Well, I'm talking now rural interstates. I'm talking—you know, I can agree with you that if you take all roads and fold it into your figures, that there are some places where 55 probably makes some sense. For example, I don't have any problem with the 55-mile-per-hour speed limit on the Washington beltway. If Maryland and Virginia want to enact a 55-mile-per-hour speed limit, I think it probably makes sense on that interstate highway.

It doesn't make very much sense on western rural interstates. It doesn't make very much sense on Pennsylvania's Route 80, out across the forests of Pennsylvania. It doesn't make much sense on the Pennsylvania Turnpike where you are outside urban areas, and that's what I'm talking about, is in those kinds of situation. The safety issue there is really a very secondary issue, isn't it?

Mr. **Haseltine**. Remember, when the 55-mile-per-hour speed limit was enacted—and I was in State government in Michigan at that point—most of the roads on which speed limits were changed as a result of the enactment of 55 were in fact rural interstates or rural two-lane roads. They were not—in the freeway system in the city of Detroit, for example, which is the second largest in this country only to Los Angeles, the speed limits were already 55 miles per hour long before the Congress got around to——

Mr. **Walker**. Excellent point, and did the fatalities on those highways drop markedly? We're using overall fatality figures here when we talk about 1974. When you go back to 1974, did the fatalities on interstate highways drop markedly at that point?

Mr. **Haseltine**. Oh, clearly. Yes, they did.

Mr. **Walker**. On rural interstate highways there was a marked decrease, and the trendline has continued downward ever since?

Mr. **Haseltine**. Along with the trendline for all fatalities having continued——

Mr. **Walker**. I'm not talking about all fatalities, now. I'm talking about rural interstate roads, where some of us are talking and where even the National Academy of Sciences evidently has said that there needs to be—at least they are not willing to recommend that there shouldn't be some change there. You know, I'm essentially talking about those roads that were designed for 75-, 80-, 85-, 90-mile-per-hour speeds when they were originally compiled. On those roads, was there a marked decrease in the number of fatalities?

Mr. **Haseltine**. And the answer is yes.

Mr. **Walker**. How much? How much per million miles?

Mr. **Haseltine**. I don't have a number.

Mr. **Glickman**. If the gentleman would yield, I think maybe the next group of witnesses might be able to answer those questions.

Mr. **Walker**. OK. Thank you, Mr. Chairman. I'll yield back.

Mr. **Glickman**. Thank you.

Mr. Haseltine, we appreciate your testimony and urge your continued flexibility as you look at this matter.

Mr. **Haseltine**. Thank you very much, Mr. Chairman.

Mr. **Glickman**. Thank you.

Our next witnesses are the folks that basically created the document, "55: A Decade Of Experience." We have Mr. Thomas Deen, executive director of the Transportation Research Board, and Mr. Alan A. Altshuler, dean, graduate School of Public Administration, New York University.

I think, Mr. Altshuler, you will be the one that will actually be testifying——

Mr. **Altshuler**. That's correct.

Mr. **Glickman** [continuing]. Or will both of you or all of you? You will be? You might identify for the record who is here with you.

Mr. **Altshuler**. I will do that.

Mr. **Glickman**. I don't know whether you intend to read the entire statement, but hopefully you can try to keep it to about 10 minutes if possible so we could be available to ask the indepth questions that the committee would like to——

Mr. **Altshuler**. That's fine, Mr. Chairman.

Mr. GLICKMAN [continuing]. Because your entire statement will appear in the record.

Mr. ALTSHULER. I will skip over it.

STATEMENT OF ALAN A. ALTSHULER, DEAN, GRADUATE SCHOOL OF PUBLIC ADMINISTRATION, NEW YORK UNIVERSITY, ACCOMPANIED BY THOMAS B. DEEN, EXECUTIVE DIRECTOR, TRANSPORTATION RESEARCH BOARD, NATIONAL RESEARCH COUNCIL; AND DAMIAN J. KULASH, ASSISTANT DIRECTOR FOR SPECIAL PROJECTS, NATIONAL RESEARCH COUNCIL

Mr. ALTSHULER. Let me say that I am Alan Altshuler, dean of the Graduate School of Public Administration at New York University. I am also a former secretary of transportation of the State of Massachusetts. I am accompanied today by Mr. Thomas B. Deen, who is executive director of the Transportation Research Board, the unit of the National Research Council that conducted this study, and Damian Kulash, assistant director of the Transportation Research Board for Special Projects.

Let me note that the report that I will be discussing this morning was done in response to a provision contained in the Surface Transportation Assistance Act of 1982. That legislative charge had two parts. First we were asked to examine the safety and economic benefits of the 55-mile-per-hour speed limit. Second, we were asked to determine whether the laws of each State act as a substantial deterrent to violations of the national maximum speed limit.

In my remarks this morning I will comment on five aspects of the committee's report: The effect of 55 on safety; the energy savings, taxpayer savings, and time costs associated with the speed limit; the committee recommendations regarding speed limits; the effect of State laws on motorists' speeding; and how the Federal process for monitoring State compliance might be improved.

Let me emphasize that the data leave wide room for differences of interpretation. All we claim, finally, is that we have carried out the most thorough review of evidence from around the world that has yet been conducted; that we approached the data without preconceptions; and that we believe we have been painstakingly cautious in our interpretations.

We devoted considerable attention in our study to appraising the safety impact of 55 in 1974, since that is the year in which its effects can be observed in purest form. Even then, however, it's clear that other factors accounted for part of the safety improvement that occurred. Total travel declined by about 1.5 percent in 1974. Additionally, there was a long-term trend of fatality decline at any given volume of traffic of about 3 percent a year, and there is a tendency for fatality rates to decline during periods of economic slowdown. Still, the size of the 1974 decline was far greater than could be accounted for by these factors. Our best judgment is that about half the 1974 safety improvement could be attributed to the 55-mile-per-hour speed limit.

Moving forward to the present, the first issue we had to address is whether 55 continues to influence driver behavior. There is a widespread popular perception that speeds have returned to their pre-1974 levels. In urban areas this is very close to the truth. In rural areas, however, where most of the high-speed driving occurs, average speeds and average speed variations have stayed down.

For example, average speeds on rural interstates fell from 65 miles per hour in 1973 to 57.6 miles per hour in 1974. They have gradually been rising in the period since but they still averaged only 59.1 miles per hour in 1983. In short, 80 percent of the 1974 slowdown has been retained. At least equally important, 100 percent of the speed variance reduction has been retained.

As I mentioned earlier, numerous other factors have intervened since 1974 to complicate our task of estimating today's costs and benefits of 55. Our best estimate, however, is that 55 continues to save 2,000 to 4,000 lives per year, a slightly greater number of severe injuries, and between 35,000 and 62,000 lesser injuries per year.

Let me pass over in my oral statement the energy savings and taxpayer savings, since the focus of this hearing is on the safety impacts.

The benefits of 55 do not come free, of course. The significant cost of 55 is borne in the form of additional time on the road. The average American motorist spends about 7 additional hours per year in his or her car as a result of 55. This translates to an average of about 40 years of additional traveltime per life saved. This sounds a bit disproportionate, perhaps, until we reflect that each life saved involves an average of 41 years of additional life expectancy. Thus, society gains roughly 1 additional year of life for each additional year that motorists spend on the road. As additional benefits, moreover, for each life saved roughly one serious injury is averted and 15 or so lesser injuries.

Most of the additional driving time occurs in increments of less than 3 minutes per trip and may be scarcely noticeable to motorists. However, the time costs are considerably more salient for those who rely on the highways to make a living: long-distance truck drivers, intercity bus drivers, traveling salesmen, and so on. Not surprisingly, support for the law is weakest among those who drive the most. Even so, slightly more than half of those drivers who are on the road more than 30,000 miles each year support the 55-miles-per-hour-speed limit. Among the population as a whole, support for 55 has been consistently in the range of 3 to 1 since 1974. A Gallup poll released in the weeks after our report showed that 25 percent of the public opposed the law in late 1984.

The other significant cost of 55 is for enforcement over and above what might be required with speed limits such as those prevailing in 1973. The best available estimate of that cost is about $120 million per year.

Taking all these considerations into account, our committee achieved a consensus in support of the view that 55 should be retained as national policy. It stopped short, however, of making a firm recommendation that it should be applied everywhere. The committee was itself divided on the question of whether the States should be allowed some leeway with respect to interstate highways in rural areas. Roads of this type, namely highways built to the highest design standards and carrying only light amounts of traffic, represent 6 percent of all 55-posted highways and they carry 19 percent of all traffic on 55-posted highways.

If the 55-mile-per-hour speed limit were raised to 65 miles per hour on rural interstate highways, we estimate that the number of traffic fatalities would increase by roughly 500 per year; that fuel consumption would increase by around 10 million barrels annually; and that taxpayers would spend an additional $10 million a year in taxpayer-supported medical and support service costs.

On the other hand, about 850,000 hours of traveltime would be saved for every life lost. This means that about 100 years of traveltime would be saved in exchange for the loss of one additional life, plus an additional serious, severe, or critical injury. This tradeoff is difficult to grasp but I think it is important to note that this means that the additional traveltime expended per life saved by the speed limit is almost four times as great on rural interstates as it is on other roads posted at 55.

Our committee was divided on whether the speed limit on rural interstate routes should be raised, because of these projected consequences. In addition, we were concerned that a relaxation of 55 on rural interstates would spill over into higher speeds on rural roads. There was certainly a good deal of evidence of a spillover effect in the other direction—that is, toward slowing down—in 1974. Nor could the committee agree on whether an increase in posted speed limits on rural interstates would lead to a reversal of the speed variance reductions achieved in 1974.

Overall, the committee judged that the value choices and uncertainties involved in any decision to relax 55 cannot be evaluated adequately by a technical group such as ourselves. Thus, we confined ourselves to presenting the evidence, noting that its ultimate appraisal is inherently a political task for the Congress.

I would like to turn now to the second part of the committee's charge from the Congress, namely, to assess whether the current laws of the States provide a sufficient deterrent to violations of the 55-mile-per-hour speed limit. We found, to our surprise, that the strength of the penalties written into State laws correlates only weakly with actual speeds and fatality rates. Moreover, the percentage of traffic speeding on the interstates is just about the same in States with strong, medium, and weak penalties.

There is evidence which suggests that motorists are more influenced by the risk of being cited at all than they are by the magnitude of the penalty. In fact, the States with weak penalties cite motorists twice as often as those with strong penalties. Overall, we conclude that there is no evidence of a direct relationship between State statutory penalties and the amount of speeding.

Finally, I would like to raise a topic that was not part of our original charge but which in any event occupied a considerable amount of our attention. It is the Federal procedure for monitoring State compliance with 55. The Federal Government requires that each State keep at least 50 percent of the traffic on roads posted at 55 at or below the speed limit, or risk losing some of its Federal highway aid.

The law also allows adjustments to the raw data on traffic speeds, however, for possible sampling, speedometer, and monitoring errors. These adjustments have become increasingly important to the States. Without them, only 11 of the 50 States would have been in compliance in 1983. The problem is that these adjustments have little scientific basis. Speedometer errors are very common, for example, but they tend to cancel out and are clearly insignificant at the statewide level. We recommend, therefore, that these adjustments should be sharply reduced.

Additionally we note that the States are equally vulnerable to penalty at the moment because of trivial or major violations. The current monitoring approach fails to distinguish between vehicles traveling 56 miles per hour and those going 80 miles per hour. Similarly, it fails to distinguish between vehicles traveling on interstate versus secondary roads. Those traveling 80 are more dangerous than those traveling 56, however, and those speeding on two-lane undivided highways are far more dangerous than those moving at the same speed on interstates.

Our committee thinks that the national monitoring system should take cognizance of these differences and should encourage the States to concentrate on preventing the more dangerous violations. Thus, we recommend that the current monitoring system be replaced by a point system weighting violations by road type and degree of speed violation. Among other things, we note, such an approach would be in accord with traditional speed enforcement practice, which is to allow motorists a few miles per hour of leeway above the posted speed limit.

In summary, we find 55 to be one of the most effective highway safety policies ever adopted. We recommend that it be retained as national policy and that we withhold judgment on the question of whether the States should be permitted some leeway to raise posted limits on rural interstate highways. We also recommend that the Federal Government alter its method of monitoring State compliance so as better to reflect the degree of safety risk associated with different types of speed violation.

Mr. Chairman, that concludes my prepared remarks. My colleagues and I will be happy to answer any questions that you may have.

[The prepared statement of Mr. Altshuler follows:]

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NATIONAL RESEARCH COUNCIL
TRANSPORTATION RESEARCH BOARD
2101 Constitution Avenue Washington, D.C. 20418

TESTIMONY OF ALAN A. ALTSHULER, CHAIRMAN OF THE NATIONAL RESEARCH COUNCIL'S COMMITTEE TO ASSESS THE COSTS AND BENEFITS OF THE 55 MPH SPEED LIMIT

Good day Mr. Chairman. I am Alan A. Altshuler, Dean of the Graduate School of Public Administration at New York University. I am delighted to be here to discuss the 55 mph speed limit. I am accompanied today by Mr. Thomas B. Deen who is Executive Director of the Transportation Research Board, the unit of the National Research Council that conducted this study.

The report that I will be discussing this morning was done in response to a provision contained in the Surface Transportation Assistance Act of 1982. That legislative charge had two parts. First, we were asked to examine the safety and economic benefits of the 55 mph speed limit. Second, we were asked to determine whether the laws of each state act as a substantial deterrent to violations of the national maximum speed limit. To address these questions, the National Research Council assembled a committee that included experts in highway engineering, traffic operations, safety research, medicine, law, trucking statistics, and other areas related to highway safety. I served as chairman of that committee. Our work, let me note, was financed by the National Highway Traffic Safety Administration, which was also extremely helpful in providing access to any and all data in its possession.

In my remarks this morning, I will comment on five aspects of the committee's report:

- The effect of the 55 mph speed limit on safety;
- The energy savings, taxpayer savings, and time costs associated with the speed limit;
- The committee recommendations regarding speed limits;
- The effect of state laws on motorists' speeding; and
- How the federal process for monitoring state compliance might be improved.

Let me note that the data leave wide room for differences of interpretation. We have spent countless hours striving to appraise the significance of imperfect, fragmentary studies and data series. All we claim, finally, is that we have carried out the most thorough review of evidence from around the world that has yet been conducted, that we have approached the data without preconceptions, and that we believe we have been painstakingly cautious in our interpretations. You will note that our estimates of the safety benefits of 55 are stated in terms of fairly wide ranges. This is to acknowledge the uncertainties inherent in the data. But we do feel that the data point consistently in certain directions, and that the truth does lie very probably within the ranges that we have put forward.

The Effect of the 55 mph Speed Limit on Safety

Let's turn now to the substance of our report, beginning with just a little bit of history. You will recall that the 55 mile per hour speed limit was enacted at the beginning of 1974, during the first Arab oil embargo. For many years previously, average speeds on the nation's main highways had been rising by about one-half mile per year. In 1974, however, a sharp drop occurred. Equally important, variations in speed--that is, the differences between faster and slower moving vehicles--also declined.

The speed limit was enacted, of course, to conserve fuel. During 1974, however, traffic fatalities, which had been rising most years and which had reached an all-time peak during 1972 and 1973, declined sharply. 9,100 fewer people died in 1974 as a result of motor vehicle accidents than the year before, the largest single year decline since World War II. As the fuel crisis receded, the 55 mile per hour speed limit was retained on safety grounds.

We devoted considerable attention in our study to appraising the actual safety impact of 55 in 1974, since that is the year in which its effects can be observed in purest form. Even then, however, it is clear that other factors accounted for part of the safety improvement that occurred.

Total travel declined about 1.5 percent in 1974. Additionally, there was a long term trend of fatality decline at any given volume of traffic of about 3 percent a year. And there is a tendency for fatality rates to decline during periods of economic slowdown. Still, the size of the 1974 decline was far greater than could be accounted for by these factors. Our best judgment is that about half the 1974 safety improvement could be attributed to the 55 mile per hour speed limit.

Moving forward to the present, the first issue we had to address is whether 55 continues to influence driver behavior. There is a widespread popular perception, of course, that speeds have returned to their pre-1974 levels. In urban areas this is fairly close to the truth. In rural areas, however, where most of the high speed driving occurs, average speeds and average speed variations have stayed down. For example, average speeds on rural Interstates fell from 65 mph in 1973 to 57.6 mph in 1974. They have gradually been rising in the period since, but they still averaged only 59.1 mph in 1983. In short, 80% of the 1974 slowdown has been retained. And, at least equally important, 100 percent of the speed variance reduction has been retained.

As I mentioned earlier, numerous other factors have intervened since 1974 to complicate our task of estimating today's costs and benefits of 55. Our best estimate, however, is that 55 continues to save two to four thousand lives per year, a slightly greater number of severe injuries, and between 35 and 62 thousand lesser injuries per year.

Energy Savings, Taxpayer Savings, and Time Costs

In addition to these safety benefits, the speed reductions attributable to 55 continue to save about 167,000 barrels of oil each day, which translates into an import cost reduction of about $2 billion a year. Further, we estimate that 55 generates taxpayer savings for medical and welfare assistance programs worth about 65 million dollars a year.

These benefits do not come free, of course. The most significant cost of 55 is borne in the form of additional time on the road. The average American motorist spends about 7 additional hours per year in his or her car as a result of 55. This translates to an average of about 40 years of additional travel time per life saved. This sounds a bit disproportionate, perhaps, until we reflect that each life saved involves an average of 41 years of additional life expectancy. Thus, society gains roughly one additional year of life for each additional year that motorists spend on the road. As additional benefits, moreover, for each life saved, roughly one serious injury is averted and 15 or so lesser injuries.

Most of the additional driving time occurs in increments of less than three minutes per trip, and may be scarcely noticeable to motorists. However, the time costs are considerably more salient for those who rely on the highways to make a living--long-distance truck drivers, intercity bus drivers, traveling salesmen, and so on. Not surprisingly, support for the law is weakest among those who drive the most. Even so, slightly more than half of those drivers who are on the road more than 30,000 miles each year support the 55 mile per hour speed limit. Among the population as a whole, support for 55 has been consistently in the range of 3-1 ever since 1974. A Gallup poll released in the weeks after our report showed that 25 percent of the public opposed the law in late 1984.

The other significant cost of 55 is for enforcement over and above what might be required with speed limits such as those prevailing in 1973. The best available estimate of that cost is about 120 million dollars per year.

Recommendations on Speed Limits

Taking all these considerations into account, our committee achieved a consensus in support of the view that 55 should be retained as national policy. It stopped short, however, of making a firm recommendation that it should be applied everywhere. The committee was itself divided on the question of whether the states should be allowed some leeway with respect to Interstate highways in rural areas. Roads of this type, namely highways built to the highest design standards and carrying only light amounts of traffic, represent 6 percent of all 55-posted highways, and they carry 19 percent of all traffic on 55-posted highways.

If the 55 mph speed limit were raised to 65 mph on rural Interstate highways, we estimate that the number of traffic fatalities would increase by roughly 500 per year, that fuel consumption would increase by around 10 million barrels annually, and that taxpayers would spend an additional 10 million dollars a year in taxpayer supported medical and support service costs. On the other hand, about 850,000 hours of travel time would be saved for every life lost. This means that about 100 years of travel time would be saved in exchange for the loss of one additional life, plus an additional serious, severe, or critical injury. This tradeoff is difficult to grasp, but I think it is important to note that this means that the additional travel time expended per life saved by the speed limit is almost four times as great on rural Interstate routes as it is on other roads posted at 55. Our committee was divided on whether the speed limit on rural Interstate routes should be raised because of these projected consequences. In addition, we were concerned that a relaxation of 55 on rural Interstates would spill over into higher speeds on rural roads. There was certainly a good deal of evidence of a spillover effect in the other direction--that is, toward slowing down--in 1974. Nor could the committee agree on whether an increase in posted speed limits on rural Interstates would lead to a reversal of the speed variance reductions achieved in 1974.

Overall, the committee judged that the value choices and uncertainties involved in any decision to relax 55 cannot be evaluated adequately by a technical group such as ourselves. Thus, we have confined ourselves to presenting the evidence, noting that its ultimate appraisal is inherently a political task for the Congress.

The Effect of State Laws on Motorists' Speeding

I would like to turn now to the second part of our committee's charge: namely, to assess whether the current laws of the states provide a sufficient deterrent to violations of the 55 mph speed limit. We found, to our surprise, that the strength of the penalties written into state laws correlate only weakly with actual speeds and fatality rates. Moreover, the percentage of traffic speeding on the Interstates is just about the same in states with strong, medium, and weak penalties. There is evidence which suggests that motorists are more influenced by the risk of being cited at all than they are by the magnitude of the penalty. And in fact the states with weak penalties cite motorists twice as often as those with strong penalties. Overall, we conclude that there is no evidence of a direct relationship betweeen state statutory penalties and the amount of speeding.

How to Improve the Federal Procedure for Monitoring State Compliance

Finally, I would like to raise a topic that was not part of our original charge, but which in the event occupied a considerable amount of our attention. It is the federal procedure for monitoring state compliance with the 55 mile per hour speed limit.

The federal government requires that each state keep at least 50 percent of the traffic on roads posted at 55 at or below the speed limit, or risk losing some of its federal highway aid. The law also allows adjustments to the raw data on traffic speeds, however, for possible sampling, speedometer, and monitoring errors. These adjustments have become increasingly important to the states. Without them, only 11 of the 50 states would have been in compliance in 1983.

The problem is that these adjustments have little scientific basis. Speedometer errors are very common, for example, but they tend to cancel out and are clearly insignificant at the state-wide level. We recommend, therefore, that these adjustments should be sharply reduced.

Additionally, we note that the states are equally vulnerable to penalty at the moment because of trivial or major violations. The current monitoring aproach, for example, fails to distinguish between vehicles traveling 56 mph and those going 80. Similarly, it fails to distinguish between vehicles traveling on Interstate vs. secondary roads. Those traveling 80 are more dangerous than those traveling 56, however, and those speeding on two-lane, undivided highways are far more dangerous than those moving at the same speed on Interstates.

Our committee thinks that the national monitoring system should take cognizance of these differences, and should encourage the states to concentrate on preventing the more dangerous violations. Thus, we recommend that the current monitoring system be replaced by a point system weighting violations by road type and degree of speed violation. Among other things, we note, such an approach would be in accord with traditional speed enforcement practice, which is to allow motorists a few miles per hour of leeway above the posted speed limit.

Conclusion

In summary, we find the 55 mile per hour speed limit to be one of the most effective highway safety policies ever adopted. We recommend that it be retained as national policy, though we withhold judgment on the question of whether the states should be permitted some leeway to raise posted limits on rural Interstate highways. We also recommend that the federal government alter its method of monitoring state compliance so as better to reflect the degree of safety risk associated with different types of speeding violation.

Mr. Chairman, that concludes my prepared remarks. My colleagues and I will be happy to answer any questions you might have.

Mr. GLICKMAN. I want to thank you for an excellent statement, also for the work that you have done. I think it was necessary to be done as a part of the process of reviewing what policy this Government enacted 10 years ago to see if it is still appropriate or not.

I would first like to ask the question, how exactly is the monitoring done? Is there a little person out there watching cars go by, and he puts a mark down on a piece of paper if the cars are exceeding the speed limits?

Mr. ALTSHULER. No. I believe that's the way it was done in most States in 1973 and 1974, but not today, no. The Federal Highway Administration has supervised the installation in each of the States of electronic monitoring devices which operate with wires, basically, embedded in the roads, and so the counting is electronic and presumably the location of the monitoring devices has been proposed by the States, cleared by the Federal Highway Administration, as providing an appropriate sampling of traffic in the State.

Mr. GLICKMAN. But again this does not take into account the nature of the speeding violation. Fifty-six is counted the same as 82?

Mr. ALTSHULER. Well, at the moment data are collected on the actual speeds but the Federal sanctioning system focuses only on the number that are exceeding 55, without regard to the degree to which they are exceeding it.

Mr. GLICKMAN. OK, and going back to your original, previous statement, you said presumably there is some sort of a process which the State and the Federal Highway Administration agree on as an appropriate way of monitoring. Did you make an independent——

Mr. ALTSHULER. Well, no, there is a process——

Mr. GLICKMAN. Yes.

Mr. ALTSHULER [continuing]. And there is the approval by the Federal Highway Administration. The question as to how perfect the sampling system is, is something that our committee did not explore.

Mr. GLICKMAN. OK. Now I think the key in terms of our interest right here, on page 4 one of the key issues you raised—and I quote your statement—"If the 55-mile-per-hour speed limit were raised to 65 on rural interstate highways, we estimate that the number of traffic fatalities would increase by roughly 500 per year, fuel consumption would increase, and taxpayers would spend an additional $10 million a year in taxpayer-supported medical and support service costs." I think this is, at least for my line of questioning, this is the nub of what I want to talk to you about in terms of how you determined that particular issue.

Let me give you the following assumptions: If we assume that a majority of people are already going 65 miles per hour on interstate highways, is your assumption in your statement based upon the fact that a majority of people are going 55 now, and you take everybody who is now going 55 and move them up to 65, or are you plugging in, into your analysis, the majority of people who are already going 65 on rural interstate highways?

Mr. ALTSHULER. No. We looked at the actual slowdown that has occurred from 1973 to date, and our analysis was based on a comparison with what would happen if people were now going at the average speeds they were going in 1973, before the enactment in 1974 of 55.

The other factor that may be worth bearing in mind is that in every year up until 1973, average speeds on the interstates were rising, so we have not taken into account what would have happened in the absence of the enactment of 55. But in fact, in the latest year that we examined, which I believe was 1983, average speeds were 59.1——

Mr. GLICKMAN. On what?

Mr. ALTSHULER [continuing]. On rural interstates, by comparison with 65 in 1973, so there has been a slowdown of about 6 miles per hour that has held since 1973.

Mr. McCURDY. Mr. Chairman—you didn't answer the chairman's question. I think what he asked was, are you taking into consideration today the statistic that Mr. Haseltine gave us, that 85 percent are now driving 65.2 miles per hour today on the highways? Now are you saying that if it was raised, that average of 65.2, to 65 miles per hour under my bill, which would be the law, that we would have 500 deaths? How are you doing that?

Mr. ALTSHULER. No. The average speed in 1983 was 59.1. Fifteen percent of the traffic was exceeding 65.2. The 85th percentile speed was 65.2, but half the traffic—well, the median speed was 59.1, so half was going faster than 59.1 and 15 percent were going faster than 65.2.

Mr. GLICKMAN. Yes. That is an explanation which I think is significantly different than what the previous witness talked about.

Mr. ALTSHULER. I don't believe so. You asked for the 85th percentile speed. The 85th percentile speed means the speed that 85 percent of the traffic is going slower than, 15 percent is going faster than. The traditional way of establishing speed limits was to examine the 85th percentile speed so that, while allowing a few miles per hour leeway, in effect law enforcement would only have to focus on the top 5 percent of traffic or thereabouts. The idea was that it's very difficult to enforce against more than 5 percent or so of the traveling public. Fifty-five represents a different approach to setting speed limits, whether correctly or not is another matter, but it has brought about a genuine slowdown in the speed of traffic on rural interstates.

Mr. GLICKMAN. Now how did you—did you carry out a separate study, methodological study on this particular issue of 55 to 65 on rural interstates? How did you compute the data, and how did you determine that you were going to lose 500 more people a year?

Mr. ALTSHULER. We did not examine speeds, the actual speeds on the highways, independently of the States and the Federal Highway Administration. We did rely on Federal data in that regard. In examining—in arriving at our estimates of 2,000 to 4,000 lives in total in—was it 1982 or 1983?

Mr. KULASH. 1983.

Mr. ALTSHULER [continuing]. 1983, and 500 of those as being lost if we raised the speed limits on the rural interstates, our procedure was as follows: We began with a detailed examination of what happened in 1974, because 1974 was the year when the speeds changed, and some other things changed as well but they weren't as dramatic. As one thinks about the highways becoming safer, the cars in the automotive fleet becoming safer and so on, the 1-year change from 1973 to 1974 was quite trivial so it was posssible to do, I think, a very highly persuasive analysis of what happened in that first year.

Now as one goes more and more years out, and this factor remains the same while all other factors are changing, one has to make estimates of what is the amount of the impact that is being accounted for by the change in the auto fleet, getting smaller but also being engineered more safely, road changes, and so on. Our best estimate—and it's a very complicated analysis—is that the road system is becoming safer by about 3 percent a year on the basis of all the things that were happening in the years immediately prior to 1973 and 1973 to 1983, which was the decade that we looked at. It is filtering out those changes, also taking into account the state of the economy because there is a business cycle effect in safety statistics, that led us to arrive at our judgment.

Mr. GLICKMAN. Yes. Well, I mean, of course 1973 and 1974 were in one sense an atypical time period because of energy-related issues that, at least in their severity and intensity, don't exist right now. Was that factored in in your judgment?

Mr. ALTSHULER. Yes, it was. We know that traffic actually declined. Now of course that doesn't affect the fatality rate directly but it does affect the number of fatalities. We also know that when there is a downturn in the economy and traffic declines, always fatalities decline disproportionately. We're not sure exactly why that is the case but it shows up in many models over time, so we did make an allowance for the economic recession effect. We also made allowance for the 3 percent change that would have been normal on a year-to-year basis.

When all those adjustments were made, however, we still found that about one-half the change that occurred—and it was a change of 9,100 lives—was attributable to 55.

The other point to bear in mind was that the change was very disproportionately on the high-speed highways. That is, the decline in fatalities on rural interstates was far greater than the decline in fatalities overall in that year. I would be happy to ask my colleague, Mr. Kulash, to tell us exactly what that percentage figure was in 1974, but it was very dramatic.

Do you have that handy?

Mr. KULASH. The decline in the fatality rate between 1973 and 1974 on interstate routes as a whole was 32 percent decline, compared for example to 17 percent decline on the primary system or 13 percent on——

Mr. GLICKMAN. OK. Now let me ask you this, though? What was the average speed on rural interstates before 1973? For example, there were many States in the West that had no speed limits—"reasonable if not posted" or "reasonable if posted"—so I'm not sure that——

Mr. KULASH. Well, during this same period the rural interstate speeds fell from 66.6 miles per hour in 1973 to 57.6, a drop of 9 miles per hour between those 2 years.

Mr. GLICKMAN. Yes.

Mr. Altshuler. Let me note that there are two FHWA statistical series. There is one that shows that speed in 1973, when the monitoring was not at precise as it is today, was that 66.6 figure that Mr. Kulash just used. There is another one that shows that average speeds were 65. We use, in our report, the more conservative estimate that they were 65.

Mr. Glickman. OK. We're going to have a vote in a minute. Let me ask you another question. Several folks have come to me and said that your studies don't take into account some positive aspects on highway safety in raising speed limits on rural interstates, in terms of the boredom factor, in terms of people falling asleep on highways, going long distances at slower speeds, those related issues. Did you take those issues into account when you were examining auto safety and truck safety on the interstate highway system?

Mr. Altshuler. We didn't find any way to take those into account statistically. What we did do was look at the actual safety statistics when speeds changed, not only in this country, by the way, but abroad. We did an international study of experience with speed limit changes in Europe as well as in the United States and again and again, in spite of subjective judgments with respect to boredom factors and so on, the evidence from around the world is that when average speeds are reduced, fatalities are also reduced. Whether it's worth it is another story, but the evidence seems very clear that speed is a contributing factor to fatalities on all kinds of roads, even when they are engineered to very high standards.

Mr. Glickman. Now a lot of the folks who administer traffic safety laws in my State are not as smart as you people are, and they don't have the benefit of the years of educational experience, but they tell me just the opposite. They say that a lot of fatalities they see on the interstates in this State have to do with people falling asleep on the road, which they say occurs more now than it did 10 or 15 years ago, and related to some of the other issues I'm talking about. Did you bring in any of these State people who have experience, hands-on experience of administering traffic laws in a State, to talk about these issues I am raising?

Mr. Altshuler. The answer is yes, that we did. We also had several State officials on the panel itself. I might say that we brought in the State police directors from several States, including a couple of those that are most resistant to the enforcement of 55, and they were unanimous in telling us that they thought it was an extraordinarily important safety measure; that in spite of what was happening in their States, they thought that it should be retained by the Congress.

Mr. Glickman. OK. I would ask my colleagues whether you think we ought to go vote and come back with questions.

Mr. Packard. Do we have other witnesses?

Mr. Glickman. It is a vote on the journal.

Mr. Packard. Do we have other witnesses?

Mr. Glickman. Oh, yes, we have other witnesses afterwards. We have a panel of witnesses afterwards, but I know that more people are going to ask you questions so if you will excuse us, we will be back in about 10 minutes.

Mr. Altshuler. Surely.

[A short recess was taken.]

Mr. GLICKMAN. Sorry for the delay. We didn't expect this vote today.

Let me just ask you one final question in terms of trends. As I look at the trends on deaths per 100 million vehicle miles, it appears to me that we have been in a general decline over the last 20 or 30 years and that the rate of decline since the 55-mile-per-hour speed limit was enacted in 1974, for the last 10 years, has not been appreciably different than the rate of decline during the previous 10, 15, or 20 years. That is, we have seen a general and steady rate of decline of deaths per whatever computation that most people utilize. Is that a fair statement?

Mr. ALTSHULER. I think it's a fair statement, except that there was a sharp drop in 1974, after which the historic rate resumed, so that there was this one year of very sharp drop which was not paid back in later years. We kept the gain.

Mr. GLICKMAN. OK. Again, that sharp drop in 1974 could have been attributed to the recession and energy problems we have had. It could have been attributed to the 55-mile-per-hour speed limit, to both, or to none of the above?

Mr. ALTSHULER. No. We did disaggregate for the many factors that various people have hypothesized could have caused the impact, and so we deflated a 9,100-life change from 1973 to 1974 into an estimate that roughly half of that was attributable to the slowdown of traffic that occurred.

Mr. GLICKMAN. OK. Thank you.

Mr. Lewis.

Mr. LEWIS. Thank you, Mr. Chairman.

How did you determine that the 55-mile-per-hour speed limit was the key variable in the downturn in the fatality rate? Now you may have answered this for the chairman. I am sorry if I was absent in another committee, but did you use factor analysis to rank the importance of other variables——

Mr. ALTSHULER. Yes, we did.

Mr. LEWIS [continuing]. Such as fuel shortage and recession and boredom and things of that nature, falling asleep?

Mr. ALTSHULER. Well, it's hard to statistically adjust for falling asleep and getting bored, but we did adjust for the factors that——

Mr. LEWIS. Have you ever driven by someone on an interstate and honked your horn at them because you saw their head nodding? I have.

Mr. ALTSHULER. Yes, indeed. Yes, indeed. What we don't have is figures on whether that happens more often today than in 1973.

We did disaggregate for those factors that we found it possible to analyze. We were able to analyze the impact of the reduction in total traffic. We analyzed the impact of the economic recession, which we know has an impact on fatalities. We analyzed the long-term impact of improvements in the crashworthiness of the auto fleet and the character of the road system. It's very hard to go much beyond that in your disaggregation, but we did do all of that and we continued to do that as we examined the changes over the years since.

Mr. LEWIS. I had asked a question earlier of Mr. Haseltine about the drunken driving, and I don't know if this question was asked.

Now there has been a tremendous pressure placed upon law enforcement over the past years, particularly since 1981, to have mandatory sentences and heavy law enforcement activity in this area. Now, as I mentioned to him, many of the highway estimates for the holidays were really curtailed because of the heavy law enforcement and the threat of law enforcement in these areas. Was this factored into your reduction in fatalities as well?

Mr. ALTSHULER. Well, we didn't find any evidence that, in the period through 1983 that we examined, that either crackdowns on drunken driving or seatbelt use increases were bringing out changes that went beyond this 3-percent-a-year factor that we have found. We have found the road system, quite independently of all other factors, is getting safer by about 3-percent-a-year, and that has been a long-term trend that we attribute overwhelmingly to changes in the character of the road system and the auto fleet.

Now it may be that in the last couple of years, if in fact there has been an upturn in seatbelt use, if there has been a change in drunken driving behavior, that this would be showing up now, but we didn't find it showing up through 1983.

Mr. LEWIS. Was there any look at the medical findings in your study, because of fatalities due to drunken driving and use of drugs?

Mr. ALTSHULER. We did examine the Federal figures on this. There is a very good fatal accident reporting system that is operated by NHTSA at the present time, yes.

Mr. LEWIS. Well, did this influence your thinking, the fact that of the number of blood tests that showed high alcohol content, driving while intoxicated, or use of other types of drugs?

Mr. ALTSHULER. Well, certainly it did, and there is no question but that drunken and drug-impaired driving are major causes of fatalities on the roads. We did consider at times—and this may be what you're getting at—the question as to whether we should look at potential alternative policies. In other words, should we be recommending tougher policies on drunken driving, should we be recommending seatbelts or airbags or something of that kind as an alternative to 55?

We finally chose not to do that, for two reasons. First of all, the Congress had asked us to look at the costs and benefits of 55; it had not asked us to address these other issues. Second, these are additive policies. In other words, if you reduce drunken driving and you get people to wear seatbelts and they also slow down, all of these factors will lead to an increase in safety, although of course the more you do one, the less impact the next one will have because you will have saved some of the lives that would have been lost already by reducing the first factor. But we only looked at what the Congress asked us to look at.

Mr. LEWIS. I guess the reason that I'm asking this, your report does reflect that safety activities and things of this nature should be enforced as well, but why didn't you consider this a factor as to the fatalities as well when you made your recommendations?

Mr. ALTSHULER. Well, the point is that what we found was that when you——

Mr. LEWIS. Yes. I just don't understand why you feel that these areas should be—even though we're talking about 55, and where possibly interstates and some other areas could have their speed limits raised—that enforcement activities should be very stringent in these areas as well, and you didn't make these recommendations, and I just want to know why.

Mr. ALTSHULER. The reason is that the Congress asked us to examine the costs and benefits of 55. If you ask me and if you ask many other members of the committee whether we feel strongly about enforcement of drunken driving laws, the answer would be yes, we do, but this was a report which at the request of the Congress examined a single safety measure, the 55-miles per hour speed limit.

Mr. LEWIS. But isn't it a fact that, if you're impaired, that you will drive faster than 55 miles per hour on an interstate or any other type of road, and you reflected that we should be looking at increased safety, enforcement, a number of recommendations, but you didn't include any of these. Even though Congress did give you two specifics, you took a broader aspect in your answer, and I'm wondering why you didn't include this. You're now falling back on the two areas that Congress asked you to look at.

Mr. ALTSHULER. Well, the reason is that we had a committee of people who were chosen for their scientific expertise, and in order to put recommendations into a report of this kind one has to have overwhelming support from a committee. I think we had 19 people on the committee, and there was a feeling on the part of some of those people that we should stick to the request that had given rise to the committee, and we did not have a mandate——

Mr. LEWIS. Now I think you're answering the question.

Mr. ALTSHULER [continuing]. To speculate and to make recommendations on a wide variety of other topics that might strike us as interesting and important.

Mr. LEWIS. Thank you.

Thank you, Mr. Chairman.

Mr. GLICKMAN. Thank you.

Mr. Reid.

Mr. REID. Even though you in fact skipped the prepared part of your testimony that dealt with the fuel savings and things of that nature, because the earlier statements from members and the witnesses dealt with the safety factors, of course that was part of your charge; was it not?

Mr. ALTSHULER. That's correct.

Mr. REID. In reading the testimony that you didn't give but that is part of the record, I find that there is approximately 170,000 barrels a day saved by virtue of the reduced speed.

Mr. ALTSHULER. That's our estimate, yes.

Mr. REID. You have heard the testimony and the statements by people here today, that if you take into consideration all the time that is wasted on the highways, that that really is meaningless. Do you believe that the fuel savings as you have stated them in the report are meaningless?

Mr. ALTSHULER. No; I wouldn't say that they are meaningless. I would say that the cost in time of 55 could not begin to be justified in terms of the energy savings associated with 55, but I think that if one looks at those energy savings as an add-on benefit, one of many benefits associated with 55, they are certainly very much worth counting.

Mr. REID. It's at least $2 billion a year less fuel we have to import. Is that not true?

Mr. ALTSHULER. That's correct.

Mr. REID. Now do you agree with the statement made by one of the other witnesses, a statement to the effect that fuel could be saved by having your tires at the proper level as far as air?

Mr. ALTSHULER. Yes; that's correct.

Mr. REID. However, how would you enforce that?

Mr. ALTSHULER. That's a more serious question. I don't see how that can be enforced. I think that the most serious ways, the most effective ways to save energy are essentially two. One is to put a tax on fuel and the second is to mandate that the automobile manufacturers produce energy-efficient cars. Those are the primary ways of saving fuel on the highways, and they are very effective, very powerful techniques. Fifty-five is a minor contributor to energy saving, but this is indeed one of the benefits of 55.

Mr. REID. You could, of course, save fuel by mandating that the manufacturers configure their cars a certain way. Mr. Walker likes Corvettes. Have them all shaped like Corvettes or something like that.

Mr. ALTSHULER. Conceivably. I have never looked into that.

Mr. REID. Now let's talk a little bit about medical costs. We hear a lot here in Congress about medical costs, Medicare and rising costs all over the country. Nevada has the highest medical costs in the United States. There is no question, however—or I'm asking you—is there a question that the 55-mile-per-hour speed limit has cut down the health care delivery costs of people throughout the country?

Mr. ALTSHULER. I think it's clear that 55 has saved in that area.

Mr. REID. Millions of dollars a year, is that right?

Mr. ALTSHULER. Quite correct. Indeed, let me add that our own estimates only look at the public costs. We didn't look at the private costs of medical care, including insurance company costs.

Mr. REID. So the only costs that you have listed here, some $65 or $70 million, deal with the costs to the public treasury?

Mr. ALTSHULER. That's correct.

Mr. REID. It doesn't take into consideration the cost to Aetna and State Farm and Fireman's Fund, all such costs as that. Is that right?

Mr. ALTSHULER. That's right, and that's only because the data were not readily available.

Mr. REID. And those, of course, would be much higher than the public costs. Is that not right?

Mr. ALTSHULER. That's right.

Mr. REID. Do you have an estimate as to how much higher?

Mr. ALTSHULER. No; I'm afraid I don't.

Mr. REID. Could you get that, and I understand it would be an estimate, and supply that to us?

Mr. ALTSHULER. I'm not sure that we can. We spent a great deal of time trying to collect all the data that we possibly could. Let me ask Mr. Kulash if he thinks that it's possible.

Mr. REID. Wouldn't the insurance industry have something like that available?

Mr. KULASH. We weren't able to get the number you're asking for, Congressman. We tried to work it out. The insurance companies of course know their total costs, but they can't allocate a portion of those to a single policy like 55, so we did strive to get the number you're talking about but weren't able to do so.

Mr. REID. Does anyone have an idea? We're talking about $65 million. That's the figure in your testimony. Ten times more, or don't you have any idea?

Mr. KULASH. I really couldn't give you a knowledgeable guess.

Mr. REID. I have no further questions.

Mr. GLICKMAN. Thank you.

Mr. Packard.

Mr. PACKARD. Thank you, Mr. Chairman.

First of all, let me congratulate you on your study and your report. I think it is a very helpful and good statement and report.

Mr. ALTSHULER. Thank you, Congressman.

Mr. PACKARD. And I appreciate the fact that you segregated the rural interstate and did not have a position on it. That, I think you recognize, is the thrust of almost all the bills that are proposed. I don't think any bill is advocating abandoning the 55-mile-per-hour speed limit. We are simply looking for maybe some kind of modification that will better serve the needs of people in rural interstate areas.

On page 4 you referred to the 55-mile-per-hour speed limit, if it were raised to 65 that we would lose 500 additional lives. These are rough estimates. On the other hand, you say that it would save 850,000 hours of traveltime? How many deaths are there, say, per million hours of traveltime. Do you have that figure? We have it on miles, perhaps, but do we have it on hours of travel?

Mr. ALTSHULER. I have never seen that figure.

Mr. KULASH. The question is miles of driving?

Mr. ALTSHULER. No; it's fatalities per million hours of driving.

Mr. PACKARD. Per million hours or any other benchmark figure, how many deaths per hours of traveltime?

Mr. KULASH. No; we haven't. We have usually dealt with per miles of travel.

Mr. PACKARD. I understand that. I'm trying to—it's obvious that there was no plugback into the lives saved by getting people off the highways, 850,000 hours, to offset some of the 500 deaths.

Mr. ALTSHULER. You mean how many of them would have been killed in other ways during those hours, or——

Mr. PACKARD. No, no, no. How many would have been killed on the highways? The 850,000 hours on the highways would create how many deaths that would be subtracted from your 500? That's what I'm looking at.

Mr. ALTSHULER. I see. What you're saying is that there is a risk factor for the additional time of exposure on the roads.

Mr. PACKARD. Yes; Pulling people off the highways a million hours is going to save some lives, I have to assume, no matter what speed they travel. That was not subtracted.

Mr. ALTSHULER. I suppose that is true. On the other hand, since all of the studies that have been done around the world of the impact of slowing people down show the savings, I think that that is intrinsically built into the data. They spent more time on the road but they're going safer. They saved some time because they're going safer. They may lose a little bit because they're on the road longer, but the total impact that we're showing is the statistical result of the combination of those factors.

Mr. PACKARD. Now another factor on the figuring of your 500 deaths with the variation in the speed limits: If the previous testimony were correct in saying that 65.2 is the average speed on rural highways during 1983——

Mr. ALTSHULER. The 85th percentile speed.

Mr. PACKARD. That's the 85th percentile. You're correct. If that were maintained, would your 500 figure still hold? In other words, if we moved the speed limit from 55 to 65.2 and enforcement, increased enforcement and other methods kept the travel speed at 65.2, would then the 500 figure still hold?

Mr. ALTSHULER. Well, if you maintained exactly the same speeds as exist now——

Mr. PACKARD. Right.

Mr. ALTSHULER [continuing]. In other words, the average speed of——

Mr. PACKARD. On rural interstates——

Mr. ALTSHULER [continuing]. The average speed of 59.1, the 85th percentile speed of 65.2, then there would be no impact.

Mr. PACKARD. There would be no impact.

Mr. ALTSHULER. But, on the other hand, the likelihood of being able to maintain an average speed of 59 when you have a speed limit of 65——

Mr. PACKARD. That's an assumption.

Mr. ALTSHULER [continuing]. Is very small.

Mr. PACKARD. I understand, although that is an assumption.

Mr. ALTSHULER. Nor would that be an objective of enforcement, of course. The objective of enforcement would be to hold people within some margin of the speed limit. In other words, historically there has always been in this country leeway that law enforcement agencies provide above the posted speed limit. They did in 1973 and they do today. Law enforcement officials told us that probably there has been some creep upward in the amount of leeway that agencies are providing the public today, but it is reasonable to believe that enforcement would begin at around 70 on average if the speed limit were 65, so we should not assume that the speeds would remain unchanged.

Mr. PACKARD. And, again, your assumption that it would be around 70 does not have to follow. I mean, we could enforce at 65 right on the button if we chose to do so. We probably wouldn't, I agree with you.

Mr. ALTSHULER. In principle we could. There are some powerful reasons why it's hard to do so.

Mr. PACKARD. I understand.

Mr. ALTSHULER. Moreover, let me add that our studies show that enforcement seems to have very little to do with what is going on. That is, we don't find that strong penalties lead to lower speeds than weak penalties, for example.

Mr. PACKARD. No, you made that clear in your testimony——

Mr. ALTSHULER. Yes.

Mr. PACKARD [continuing]. But you did not verify that penalties, weak or strong—in fact, I thought your testimony indicated that the penalty was more the deterrent than the severity of the penalty.

Mr. ALTSHULER. Well, all we know——

Mr. PACKARD. Which means if tickets were issued of 66 miles per hour irrespective and it was done by radar and other enforcement efforts, then it would possibly have some reduction than if we enforced at 70 miles per hour.

Mr. ALTSHULER. That's conceivable. Our—my best guess, reading this analysis, is that the most powerful thing that's working with 55 is all those signs saying "55." I don't see a great deal of evidence that anything that the law enforcement authorities are doing is having a great impact, except the general background knowledge that you can be cited if you go very much above this speed limit, but there is room for a good deal of disagreement.

Mr. PACKARD. One last question, and that is, the figure, the speed, average speed on the freeways today has been increasing from year to year since 1974. Is that true?

Mr. ALTSHULER. That's correct.

Mr. PACKARD. There is the general uptrend. Is it anticipated in your judgment that that will continue in years ahead, if we retain the 55-mile-per-hour speed limit?

Mr. ALTSHULER. We did not speculate in the report on that. We did point out that on the rural interstates only about 20 percent of the speed reduction that occurred in 1974 has been lost after a decade of creep upward, so it's a very slow creep. On the other hand, of course, on the urban highways virtually all of the slowdown has been recovered, so that people are not driving slower today in urban areas than they were in 1973.

Mr. PACKARD. So if there is a continual creep and it got up to, say, 61 or 62 miles per hour in another 5 years, we could lose a portion of the 500 lives just by an increase of speed?

Mr. ALTSHULER. That's correct. An important question, of course, is what would be happening if the speed limit were higher? In other words, I pointed out at the beginning of my testimony that speeds had been creeping up every year up through 1973, so that the tendency to creep which we have now traced back to 1974 is not just a post-1974 phenomenon. It was a pre-1974 phenomenon as well, and it may well be that in the absence of 55 the average speeds today would be up in the 68- or 69-mile-per-hour range rather than the 65 that we traced to 1973.

Mr. PACKARD. Please don't misunderstand my line of questioning. I'm not—I'm pleased with your report. I simply want to put everything in perspective to help us make a decision on a very narrow issue, and that is, should we reconsider the 55 miles per hour on rural interstates?

Mr. ALTSHULER. I do understand, Congressman.

Mr. PACKARD. Thank you, Mr. Chairman.

Mr. GLICKMAN. Thank you. A couple of last questions: As a part of your report, did you have time or the effort to focus on the changing nature of law enforcement in this country, that is, the focus of law enforcement on traffic versus nontraffic related items, the time spent by law enforcement in their changing profession?

Mr. ALTSHULER. We did not go into that in depth. We did try to gather some estimates of the additional sums that were being spent to enforce 55 that would not be necessary in the absence of 55, and we made a dollar estimate of that.

I should mention, because it's an important theme in the report, that law enforcement authorities were unanimous that the current monitoring mechanism, the absence of a point system of the type that we recommend, leads them to misallocate police resources. They can write more tickets per hour if they go onto the rural interstates than if they go onto the secondary, 2-lane roads and so on, and yet it may be that they can do more safety good by going onto the rural, 2-lane roads. So, in effect, the current monitoring mechanisms encourage them to focus on exactly those rural interstates to a greater degree than they would if there were a different method of measuring compliance with 55.

Mr. PACKARD. Mr. Chairman.

Mr. GLICKMAN. Yes.

Mr. PACKARD. Before we dismiss these witnesses, I overlooked one question if you would permit me the opportunity.

In any of your studies, did you determine the accident rate on interstates that are undivided, compared to divided interstates, compared to those that have barriers between the oncoming traffic, solo accidents versus multiple accidents, which might give us some clue, an indication as to the nature of high-speed accidents that would have an impact upon the figures that you have left us?

Mr. ALTSHULER. No, I don't believe that in our study we did that.

Mr. PACKARD. Would you, in your studies, have any—what would be your attitude of having a different speed limit on a well-divided 4-lane or more interstate in rural areas, compared to an interstate that was not—did not have those features?

Mr. ALTSHULER. Well, I would rather not take a position on that, but we did assume that the vast majority of rural interstates, since they do meet Federal interstate standards, are divided roads and are of at least 4 lanes capacity. I think there cannot be very many 2-lane undivided rural interstate highways in the United States.

Mr. PACKARD. OK. Thank you.

Mr. GLICKMAN. Just a couple more questions: Is it true, as your study seems to indicate, that without the use of a number of nonscientific adjustments to the traffic speed data of the States, that nearly 80 percent or 39 of the 50 States would have lost all their highway money in 1983 due to noncompliance?

Mr. ALTSHULER. Under the law as it stands, that's correct.

Mr. GLICKMAN. OK. I think that's an important fact to get in the record.

Mr. ALTSHULER. Well, not all of their highway funds; all of the highway funds that are at risk under the 55 legislation.

Mr. GLICKMAN. That's what I mean, those particular funds.

We've got another vote and I think that because of the nature of the time we are going to probably excuse you now. We appreciate your testifying.

I think that the thing that still confuses me a bit, however, is that I think the data base and the scientific research that you did was good and useful to this country, but we still leave ourselves with this open question about, is there an open door for part of the speed limit in this country to be raised. I gather what you are saying is that it's not clear, and this is a political issue that Congress should determine based upon a variety of facts. That is, you think it's clear with respect to the general proposition that the 55-mile-per-hour speed limit should be kept——

Mr. **Altshuler**. That's correct.

Mr. **Glickman**. But you open the door with respect to a limited group of highways which you apparently say that we may want to consider a cost-benefit ratio, other factors may enter into the equation, and therefore it is not so clear in this one area.

Mr. **Altshuler**. That's correct. We deliberately did not try to make dollar estimates of the value of a life saved or of an injury averted, so we're comparing apples and oranges. We're comparing safety benefits on the one hand with time costs on the other hand, and we're pointing out that the cost effectiveness of 55 is four times greater on the other roads than it is on the rural interstates. The question as to whether it is still good enough on the rural interstates, whether it should be retained, we felt was a political question.

Mr. **Reid**. Mr. Chairman.

Mr. **Glickman**. Yes.

Mr. **Reid**. If I could just make one comment, though——

Mr. **Glickman**. Sure.

Mr. **Reid**. My opening statement here said that I was coming into these hearings with an open mind, to listen to the testimony, to study the documents presented to us, hoping—as I was when I prepared that statement—that I would learn something at these hearings and get some expert advice as to what happens on rural interstates if you drive faster, what about fuel consumption, and frankly we haven't gotten anything yet. The opinions are, as the chairman has indicated, it seems leaving it to us to make a political decision.

I respectfully submit, Mr. Chairman, to all these witnesses that I don't think it should be a political decision entirely. I am willing to make those political decisions but I think we are entitled to more expert testimony as to what basically will happen with an increase in the speed, and we don't have that yet. Maybe it will come later but, looking at the panel of witnesses, I kind of doubt it.

Mr. **Glickman**. Well, I would just say—go ahead and answer that, Mr. Altshuler, and then——

Mr. **Altshuler**. Thank you.

I frankly think that we have carried this about as far as the experts can carry it. You might say, "Well, what about a particular accident where somebody falls asleep on the road," and so on. The fact is that accidents have multiple causes. No accident has a single cause. You haven't put on your seat belt; you're drunk; you're going too fast; you fall asleep. All these things lead to the accident. If one of them were different, maybe the accident wouldn't have been as severe.

Mr. **Reid**. But of course any of these causes, if you're going faster, it would be commonsense that——

Mr. **Altshuler**. Yes, so all one can do is try to disaggregate statistically as much as you can, looking for windows when things change dramatically. That's why we looked all over the world at the evidence of what happened when speeds slowed down, because the most compelling evidence is in the first year after the change occurs. Thereafter, you have to try to disaggregate everything else that has been happening for many years.

Mr. McCurdy. Mr. Chairman.

Mr. Glickman. I tell you, we are going to have to break. We've got 6 minutes left and I——

Mr. McCurdy. I know, but I wanted to——

Mr. Glickman. OK, go ahead.

Mr. McCurdy [continuing]. Before they leave, I just wanted to ask one quick question: A person going over to that, a Member, asked me what we were having hearings on. I said, "The possibility of raising the speed limit to 65." He said, "It automatically means that we will lose 500 additional lives, if we do that, on rural interstates."

Is that accurate—since you wrote the report, he's citing your statistics—for someone to automatically say, "It's going to cost 500 lives if we do that," is that an accurate judgment based upon the evidence that you have, in your opinion?

Mr. Altshuler. It's our best judgment, but it's a range, it's the middle of a range which we would roughly say is plus or minus one-third.

Mr. Glickman. I would just say that we probably have some—although your report I am sure was done with the best ideas and utilization of scientific methodology—I would say that we probably have a situation where there may be differences of opinion, but we appreciate the thoughtfulness of your testimony and your report today.

We also have a philosophical question here as well, that is, who should regulate safety. You didn't get into that question directly.

Mr. Altshuler. No, we did not.

Mr. Glickman. Maybe that's one of the reasons you threw it back on us, and I wish you could have given us categorical answers, but you didn't. I did learn the meaning of the word "disaggregation" today, however, which is something I didn't know before.

We thank you for your testimony and we may be back in contact with you. We appreciate, however, the work that the National Academy went into, dealing with this issue.

Mr. Altshuler. Mr. Chairman, thank you very much.

Mr. Glickman. Now let me just tell the other witnesses, we will be coming back. We have another vote and we will be back in 10 minutes. We have to vacate this room at 1:30, so I apologize but I would tell the witnesses that they need to keep that in mind as they testify.

[Recess taken.]

Mr. Glickman. Why don't we go ahead? We apologize for the chicanery that's happening on the House floor which is causing us to vote in an unexpected manner. That's a personal value judgment. It may not be shared by others here.

We have a users panel now, and we would like to ask them—I see my friend Joan Claybrook here—Joan Claybrook, Katherine Hall, James Baxter of Citizens for Rational Traffic Laws, and John

Tomerlin with Road & Track Magazine. Why don't you all come up and we'll take you as a group? Again, we apologize for the delays.

Because of the time delays, we need to be out of here by 1:30 so I would really ask your indulgence in trying to keep your remarks as short as possible. I am going to set a bell for about 7 minutes, and then if you go a little beyond that, that's OK, but I need to do it because we need enough time to ask questions here and also get to our last panel, which is a State panel, where people have come also from all over the country.

So, Joan, why don't you begin. I gather that you and Katherine Hall are together.

Ms. **Claybrook**. That's correct.

Mr. **Glickman**. So go ahead and proceed.

STATEMENT OF JOAN CLAYBROOK, PRESIDENT, PUBLIC CITIZEN, ACCOMPANIED BY: KATHERINE HALL, CENTER FOR AUTO SAFETY

Ms. **Claybrook**. Mr. Chairman, thank you for the opportunity to testify today. We certainly appreciate it. With me today is Katherine Hall, who is an attorney who specializes in highway safety matters with the Center for Auto Safety.

We are here today to urge the Congress to continue its 11-year support for the 55-mile-per-hour speed limit as a maximum limit for this Nation. We have studied the report prepared by the National Research Council and have found that the report estimates that 55 has saved 25,000 to 50,000 lives since the Congress enacted it. The report states that, "Few safety policies can rival the impact of 55 in reducing the accidental deaths of Americans as they travel around the country."

We agree with most of the report's conclusions, including the recommendation for altering the existing mechanism for monitoring compliance by the States to reflect important safety priorities. However, we strongly disagree with the views of a few members of the study committee that consideration should be given to relaxing the limit on some high-speed rural interstate roads if compensating safety improvements are simultaneously adopted. We believe that there are at least 10 compelling reasons why this is not in the best interests of the Nation.

First, the most compelling reason against raising the speed limit on rural interstates is that it would increase highway deaths. The Transportation Research Board study estimates that approximately 500 more people would die in highway crashes if the limit were increased to 60 or 65 on all 31,500 miles. The speed limit would also result in additional injuries every year.

Further, the increased cost for taxpayers for Medicare, Medicaid, and disability and other programs would be $10 million, and this doesn't even include the multitude of other societal costs associated with highway deaths and injuries, such as health insurance, lost income, taxes, unemployment, welfare, police costs, long-term medical care, rehabilitation services, funeral costs, pain and suffering, and the costs to other family members due to bereavement, loss of income, and the necessity for care of the disabled.

While the fatality increase is an informed estimate, there is no question that the probability of a fatality occurring in a crash increases with speed. The NHTSA, the National Highway Traffic Safety Administration, has estimated that the likelihood of a fatality doubles as the speed increases from 45 to 60 miles per hour and doubles again as the speed increases from 60 to 70. Further, given the study report estimate of 2,000 to 4,000 lives now saved by 55, an increase of 500 deaths would reduce the effectiveness of the speed limit by 12 to 25 percent.

Second, the study committee emphasized that any relaxation of this law should be considered only if other, equally effective policies are substituted for it, but the fallacy in this view is that it presumes that 45,000 deaths a year on the highway is acceptable, that this level need only be maintained, not increased. Instead, our public policy must be that every effort be made within our technological capability to further reduce this epidemic on the highway.

The fact that improved vehicle or highway design might save some lives that increasing 55 would destroy is hardly a rationale for raising 55. We should improve vehicle safety and retain the safety benefits of a uniform national 55 limit. In addition, raising the limit would increase highway deaths immediately, since drivers would immediately speed up, while any future lives saved from other safety advances would take far longer.

Third, to achieve reductions in highway death and injury, the interrelationship between vehicle crashworthiness and highway speed should be considered. For example, smaller cars in use today are inherently less safe than they were a decade ago. In addition, improved vehicle safety will have a greater payoff with the 55-mile-per-hour limit than with a higher limit.

We know, and we have since 1972, that vehicles can be designed to crash without injury or death, serious injury or death to occupants, at 50 miles per hour. We don't have those on the highway today but the cars that were designed—the experimental safety vehicles—by the Department of Transportation in the 1970's have proven that this is possible—indeed, entirely feasible.

Thus, even though a safety vehicle such as this is not currently being manufactured, although a Mercedes with air bags begins to approach this goal, we do in fact have the technological capability to produce cars to protect occupants at almost the national maximum speed limit today. This means that we have the potential to drastically reduce highway deaths and injuries, which remain the largest killer of Americans under age 34 and cost the public $60 billion a year.

Fourth, the 55 limit should be retained on all roads because it reduces speed differential among vehicles. Differential speed among vehicles traveling the same highway is hazardous, and the higher the speed limit, the more likely there is to be speed variation. The study report notes, "When different vehicles travel at different speeds, driving involves more passing and lane changing and safety is impaired. Statistical analyses often indicate that the variance in speeds, more than the average speed, is linked to safety."

Furthermore, the major source of pressure for increasing the speed limit comes from truckers who want to drive at higher speed, yet these vehicles are significantly more dangerous to the rest of the driving population when their speeds increase. While most of the trucking companies continue to support 55 because of the tremendous fuel savings, independent truckers generally do not.

A special problem with large trucks, particularly in traffic where vehicles are traveling at different speeds, is the lack of adequate brakes. No safety standard has been in effect for truck brakes since 1978 to adequately stop trucks in the same lane of traffic. As the study report points out, at normal braking deceleration a vehicle traveling 70 miles per hour goes 351 feet while the brakes are actually being applied. In contrast, a vehicle at 55 continues for only 217 feet, more than 100 feet less. For large over-the-road trucks, the difference in stopping capability right now, today, compared to cars is already 100 feet, and this increases at higher speeds.

Fifth, it is possible that there could be spillover effects of increasing 55 on rural interstate highways, resulting in drivers also increasing their speeds on other roads such as 2-lane rural roads where higher speeds are especially dangerous. As the study notes, "The strength of the spillover effect cannot be firmly established but it does provide one more reason for caution in contemplating upward adjustments of 55."

Sixth, the 55-mile-per-hour speed limit also produces important fuel savings. The study committee estimates that it saves approximately 167,000 barrels of petroleum every day, 2 percent of the Nation's fuel consumption, resulting in an approximate $2 billion energy savings to this country. At a time when we continue to be heavily dependent on foreign supplies, these fuel savings should also be preserved.

Seventh, if the 55-mile-per-hour speed limit is altered for some highways, it could create the public perception that the limit is not sufficiently justified, making it harder to enforce on those roads where it is retained. As the study report notes, "If by increasing the speed limit on a few roads the Federal Government creates a sense that the 55-mile-per-hour limit on other roads is unimportant, slated for replacement, or unjustified, then the consequences of selectively increasing speed limits on a restricted group of roads could be greater than those detailed here."

The study report suggests that increased enforcement of the limit where it is retained might compensate for such a perception but, as is evident, voluntary compliance with the law is essential for effective law enforcement, and any steps that undermine public enforcement make enforcement harder and more expensive. Also, while enforcement of any speed limit is always a challenge, with 55 as a national limit the person stopped by the police cannot plead ignorance about not knowing what the limit is on an unfamiliar road or in an unfamiliar State. With the differential speed limits, the burden on the police will increase and safety will be decreased.

Eighth, there is broad public support for 55. According to the study report, 76 percent of the public supports it in the most recent poll. The poll also indicates there is broad support across the country. Even in the western States, which I note have been highly represented at this hearing, where there have been legislative proposals introduced in the past not to comply with the law, the support is 72 percent in favor and 25 percent against.

In view of the support of the vast majority of the public, the complaints of a small segment of the population should not be the deciding factor in this life-and-death decision, and I might note that, 55 compared to other behavioral-type laws such as drunk driving laws and seat belt use laws, has survived very well with its compliance.

Ninth, one reason for the broad public support is that it imposes only minor inconveniences on the public, and I won't go into the rest of that but in fact it's only 2 or 3 minutes per trip according to the report.

Tenth, until publication of this report there has been little pressure at the State level for removal of 55 for several years. I think in large measure, Mr. Chairman, this can be attributed to the leadership in the Congress that has resisted this kind of change, which really is unwarranted and which would increase death and injury.

Finally, I would urge that the committee consider the compliance measuring system which we mentioned, which we think could be revised to be more safety oriented.

That is my full statement, Mr. Chairman. I appreciate the opportunity.

[The prepared statement of Ms. Claybrook follows:]

Statement by Joan Claybrook, President of Public Citizen
On the 55 MPH Speed Limit
Before the Subcommittee on Transportation, Aviation and Materials
Committee on Science and Technology
House of Representatives
February 21, 1985

Mr. Chairman, members of the Committee, I am pleased to testify before you today on the 55 mph speed limit, one of the most humane and cost effective laws ever enacted by the Congress. Accompanying me is Katherine Hall, an attorney with expertise in highway safety matters representing the Center for Auto Safety.

Public Citizen is a national public interest organization with 60,000 members nationwide. We specialize in public policy issues on health and safety, consumer rights, safe energy, fair taxes, corporate and government accountability, freedom of information, and citizen delivery of legal services. The Center for Auto Safety is also a non-profit public interest organization specializing in motor vehicle and highway safety matters.

We are here today to urge the Congress to continue its eleven year support for the 55 mph speed limit as a maximum speed limit for this nation. We have carefully studied the report prepared by the National Research Council, Transportation Research Board in 1984. The report estimates that 55 mph has saved 25,000 to 50,000 lives since the Congress enacted it in 1974. The report notes that "few safety policies can rival the impact of the 55 mph speed limit in reducing the accidental deaths of Americans as they travel about the country."

We agree with most of the report's conclusions, including the recommendation for altering the existing mechanism for monitoring compliance by the States to reflect important safety priorities. However, we strongly disagree with the views of a few members of the study committee that consideration should be given to relaxing the 55 mph speed limit on some high speed rural Interstate roads if compensating safety improvements are simultaneously adopted. We believe there are at least ten compelling reasons why this would not be in the best interests of the nation.

1. The most compelling reason against raising the speed limit on rural Interstates is that it would increase highway deaths. The Transportation Research Board study estimates that approximately 500 more people would die every year in highway crashes if the speed limit were increased to 60 or 65 mph on all 31,500 miles of rural Interstate highway. Although the study does not estimate the increase in injuries that higher speed limits would produce, a proportional increase in the current three million serious highway crash injuries would amount to about 30,000 additional serious injuries. Further, the increased taxpayer cost for medicare, medicaid and disability and other aid programs would amount to about $10 million. This figure does not even include a multitude of other societal costs associated with highway deaths and injuries such as health insurance, lost income and taxes, unemployment, welfare, police costs, long term medical

care, rehabilitation services, funeral costs, pain and suffering, and the costs to other family members due to bereavement, loss of income, and the necessity of care for the disabled.

While the fatality increase is an informed estimate, there is no question that the probability of a fatality occurring in a crash increases with speed. The NHTSA has estimated that the likelihood of a fatality doubles as the speed increases from 45 mph to 60 mph and doubles again as the speed increases from 60 mph to 70 mph. Further, given the study report estimate of 2,000 to 4,000 lives saved by 55 mph now, an increase of 500 deaths would reduce the effectiveness of the speed limit by 12% to 25%.

2. The study committee emphasized that "any relaxation of this law should be considered only if other equally effective policies could be substituted for it." But the fallacy in this view is that it presumes that 45,000 deaths a year and three million serious injuries are acceptable, that they need only be maintained, and not increased. Instead, our public policy must be that every effort be made within our technological capability to further reduce this epidemic on the highway. The fact that improved vehicle or highway design might save some lives that increasing the 55 mph would destroy is hardly a humane or reasonable argument. We should improve vehicle safety and retain the safety benefits of a uniform national 55 mph speed limit. In addition, raising the speed limit would increase highway deaths immediately since drivers would immediately speed up while any future lives saved from other safety advances would take far more

time to be fully realized.

3. To achieve reductions in highway death and injury, the interrelationship between vehicle crashworthiness and highway speed must be considered. For example, the smaller cars in use today are inherently less safe than just a decade ago. In addition, improved vehicle safety will have a greater payoff with a 55 mph speed limit than with a higher limit. Since the first report by the NHTSA at the Second International Conference on Passive Restraints in May 1972, we have known that vehicles can be designed to crash without serious injury or death at 50 mph. Indeed, in 1980, the NHTSA technical staff reported at the International Experimental Vehicle Safety Conference in Wolfsburg, Germany that the Minicars Research Safety Vehicle passed the 50 mph barrier crash tests successfully. This vehicle was constructed under contract to the NHTSA. It weighs 2600 pounds, achieves 32 average mpg fuel economy and 50 mph safety protection. There is no reason, other than the resistance of the manufacturers, why a vehicle of this capability could not be sold to the public today.

Thus, even though such a safety vehicle is not currently manufactured (although the Mercedes with airbags approaches this goal), we in fact have the technological capability to produce cars to protect occupants at almost the maximum national speed limit. This means that we have the potential to drastically reduce highway deaths and injuries which remains the largest killer of Americans under the age of 34 and costs the public $60 billion dollars per year.

4. The 55 mph speed limit should be retained on all roads because it reduces the speed differentials among vehicles. Differential speed among vehicles traveling the same highways is hazardous, and the higher the speed limit the more likely there is to be speed variation. The study report recognizes that "When different vehicles travel at different speeds, driving involves more passing and lane changing, and safety is impaired. Statistical analyses often indicate that the variance in speeds, more than the average speed, is linked to safety." Furthermore, the major source of pressure for increasing the speed limit comes from truckers who want to drive higher speeds, yet these vehicles are significantly more dangerous to the rest of the driving population when their speeds increase. While most of the trucking companies continue to support 55 mph because of the tremendous fuel savings, independent truckers generally do not. A special problem with large trucks, particularly in traffic where vehicles are traveling at different speeds, is the lack of adequate brakes. No safety standard has been in effect for truck brakes since 1978 to adequately stop trucks in the same lane of traffic. As the study report points out, at normal braking deceleration a vehicle traveling 70 mph travels 351 feet while the brakes are applied. In contrast, a vehicle traveling at 55 mph continues in motion for 217 feet. For large over-the-road trucks, the difference in stopping capability compared to cars is already a hundred feet, and this increases at higher speeds.

5. It is possible that there could be spillover effects of increasing 55 mph on rural Interstate roads, resulting in drivers also increasing their speeds on other roads such as two lane rural roads, where higher speeds are especially dangerous. As the study report notes, "The strength of the spillover effect cannot be firmly established, but it does provide one more reason for caution in contemplating upward adjustments in the 55 mph speed limit."

6. The 55 mph speed limit also produces important fuel savings. The study committee estimates that the 55 mph speed limit saves approximately 167,000 barrels of petroleum every day (2% of the nation's fuel consumption), resulting in an approximate $2 billion dollar energy saving to this country. At a time when this country continues to be heavily dependent on foreign energy supplies, this fuel savings should be preserved.

7. If the 55 mph speed limit is altered for some highways, it could create the public perception that the 55 mph limit is not sufficiently justified, making 55 mph harder to enforce on those roads where it is retained. As the study report notes, "if by increasing the speed limit on a few roads the federal government creates a public sense that the 55 mph speed limit on other roads is unimportant, slated for replacement, or unjustified, then the consequences of selectively increasing speed limits on a restricted group of roads could be greater than those detailed here." The study report suggests that increased enforcement of the speed limit where it is retained might

compensate for any such perception. But as is evident, voluntary compliance with the law is essential for effective law enforcement and any steps that undermine public support makes enforcement that much harder and more expensive.

Also, while the enforcement of any speed limit is always a challenge, with 55 mph as a national speed limit, the person stopped by the police cannot plead ignorance about not knowing the limit on an unfamiliar road or in an unfamiliar state. With differential speed limits, the burden on the police will increase and safety will be decreased.

8. There is broad public support for the 55 mph speed limit. According to the study report, 76 percent of the public supports it in the most recent poll. The poll also indicates there is broad support across all regions of the country. Even in the western states where there have been state legislative proposals introduced in the past not to comply with the law, the support is 72% in favor compared to 25% against. In view of the support of the vast majority of the public, the complaints of a small segment of the population should not be the deciding factor in this life and death public policy decision. Compared to other laws governing driver behavior, such as belt use laws and drunk driving prohibitions that often loose public support and compliance within several years after enactment, the 55 mph speed limit has held its own. While most drivers exceed the limit by about 3 to 5 mph, this is true for all speed limits, regardless of whether they are set at 40 or 60. And since most police agencies

do not attempt to stop drivers who travel within 5 mph of the limit, because of potential challenges to the accuracy of the measurement instruments or speedometers, most drivers behave accordingly. There is no dispute about the fact that the law has virtually eliminated the very high speed drivers from our radar system.

9. One reason for the broad public support for the law is that it imposes only minor inconveniences to the public compared to the benefits. Although the study report estimates the amount of additional travel time from 55 mph amounts to about one billion hours a year, or an average of 7 hours per year for each highway user compared to 1973 speeds, the amount of additional time per trip is usually in one or two minute increments. Also, some motorists, particularly the elderly, prefer to drive in moderately paced traffic. Furthermore, as the study notes, the cost of the additional travel time is at least partially offset for long distance truckers and other significant road users by the savings from reduced fuel, maintenance, and insurance costs.

10. Until publication of the study report this winter, there had been little pressure at the state level for removal of the 55 mph speed limit for several years. In large measure this can be attributed to the strong support for the law in the Congress, and the failure of the Administration to take any steps to challenge it despite such a recommendation in the 1980 Republican platform. With continued support in the Congress, and the clear statement in the law that federal aid highway funding would be discontinued

for any state that refuses to adopt the 55 mph maximum speed limit, there is virtually no likelihood that any state will not maintain it. With more than a decade of new drivers having learned to drive under the 55 mph speed limit mantel, and the widespread public support for 55 mph, the Congress should maintain this high payoff statute.

Finally, with regard to the system for measuring compliance with the law, we endorse the recommendations of the Transportation Research Board study report and suggest that the formula be revised to place more emphasis on high speed violations. The study report recommends a point system for doing this. The point system could also place more emphasis on violations occurring on less safe road systems. By weighting the enforcement scheme in such a manner, law enforcement agencies would be encouraged to concentrate their resources on the more hazardous offenders rather than, as they do now, primarily on the users of the Interstate system.

In conclusion, Mr. Chairman, we urge the Committee to retain the 55 mph speed limit, but to adjust the enforcement scheme to make it more rational and supportive of the safety purpose.

Thank you.

Mr. GLICKMAN. Thank you, Joan. I think for the record it should be indicated that you have had enormous experience in the issues of highway safety and have served your country well. While we may not all agree specifically on each issue, the value of you as an expert witness I think is very important at this hearing.

Did you read the statement for you and Ms. Hall?

Ms. CLAYBROOK. This is for both of us.

Mr. GLICKMAN. OK. Let me go and finish the panel, then. Our next witness is Mr. James Baxter, Citizens Coalition for Rational Traffic Laws, Dane, WI.

Mr. Baxter, it is a pleasure to have you here. I might mention that even though I tell you that your entire statement will appear in the record, which it will, so will your verbal statement as well. We do this to try to accelerate the hearing process, but both the verbal and written statements appear in the record.

STATEMENT OF JAMES J. BAXTER, PRESIDENT, CITIZENS COALITION FOR RATIONAL TRAFFIC LAWS, INC., DANE, WI

Mr. BAXTER. Thank you, Mr. Chairman. As stated, my name is James J. Baxter, and I am president of the Citizens Coalition for Rational Traffic Laws, an organization dedicated to repealing the 55-mile-per-hour speed limit and returning speed limit regulation to the individual States.

In 1982, Congress was confronted with a conflict between those Members who wanted to intensify the national commitment to the 55-mile-per-hour national maximum speed limit and other Members who either opposed the law in general or feared their home States would suffer financial sanctions for noncompliance. The resulting compromise was a congressionally mandated study. The authorizing language set the tone of this study: "* * * a comprehensive analysis of (1) benfits, both human and economic, of lowered speeds due to enactment of 55, with particular attention to savings to the taxpayer, and (2) whether the laws of each State constitute a substantial deterrent to violations."

It was never suggested that there were negative aspects affiliated with the national maximum speed limit. The tone and underlying assumptions were that the 55-mile-per-hour national maximum speed limit is a good public policy and one that should be continued. This was hardly the foundation for a study now being touted as an objective analysis of the costs and benefits attributable to the 55-mile-per-hour speed limit.

The study committee consisted primarily of persons with a pro-55 bias. While the congressional liaisons represented appropriate committees, it must be recognized they also represented staunch and powerful advocates of the 55-mile-per-hour speed limit—in one case a principal author. Add in a liaison from the agency responsible for promoting the national maximum speed limit, and it is not unreasonable to suggest the study committee was well weighted in favor of retaining this law.

Without dissecting the committee's report page by page, we would like to touch upon the major differences of interpretation.

Does or did the 55-mile-per-hour speed limit save lives? When the 55-mile-per-hour speed limit was passed in 1974 there were initial claims of 9,000 lives being saved by the law. Later pronouncements scaled the claims down to 6,000 lives saved, and the current report estimates 3,000 to 5,000 lives were initially saved in 1974. While we will agree that lower speeds induced by the oil embargo resulted in fewer fatalities, we believe the speed limit's role was limited and overstated.

In response to an earlier draft we asked, "What are the consequences of people having to spend a billion extra hours on the road?" A simple and admittedly arguable analysis can be performed where these hours of travel time are converted into vehicle miles traveled, and would indicate 1,600 additional lives lost as a result of the 55-mile-per-hour speed limit. We are not suggesting this is an infallible analysis, but the real answer lies somewhere between zero and our worst case scenario.

Physical improvements in the highway environment, improved emergency medical assistance, and other safety initiatives are mentioned but are not quantified in any meaningful way. The embargo-induced lower speeds did reduce speed variance and in all probability brought vehicles back down to speeds within the design limits of selected highways. It should be noted that the fatality rate returned to historic trend levels by 1977, despite increasing highway speeds.

Today the 55-mile-per-hour speed limit saves lives only if the other alternative is an arbitrary return to 1973 speed regulations. Realistically, the lasting benefits of the 55-mile-per-hour speed limit can best be sustained by adopting a more rational system of speed limit regulation.

There is general agreement that the 55-mile-per-hour speed limit is responsible for approximately a 1-percent saving in petroleum consumption. During the period of Federal regulation of fuel distribution, this percentage was considered of minor to minimal importance. In a free market economy, it can best be classed as trivial. Product pricing, alternate fuels, shifting to more efficient vehicles already in the marketplace, and personal adjustments in travel plans could easily accommodate fluctuations of this magnitude.

Personal discretion and individual priorities have in the past and will continue to determine private energy consumption. Supply-and-demand considerations will determine energy pricing, and we believe that outside a national emergency, the individual citizen should have the liberty to determine how much of his or her income to invest in energy resources and how these resources will be personally used.

We fully realize the trauma associated with serious motor vehicle accidents. On a personal level, the ramifications can be overwhelming. However, much of the debate centered on public policy relates to the economic impact of these accidents on the taxpaying public.

The findings of the study committee actually suggest that it costs more to enforce the 55-mile-per-hour speed limit than is returned in public benefits. Again, we are speaking solely in monetary terms. Expenditures are listed at $120.9 million—that's primarily for enforcement—and tax dollar savings are estimated at $62.9 million, leaving a $58 million negative balance. However, the committee dismisses this imbalance by suggesting the enforcement efforts are supported by fines levied against persons exceeding the speed limit. They do not give passing mention to the possibility that the fines are just another way of extracting private resources to support a public program—in other words, another tax but one that is applied on the basis of how fast someone drives down the highway.

Despite our earlier requests and suggestions, no attempt was made to measure the financial and work load impact on the judicial system, the lost or wasted capacity of highways designed for higher speeds, and the negative impacts on higher priority enforcement programs when personnel are diverted to the administration and enforcement of the national maximum speed limit. From a purely economic standpoint, we felt an accurate appraisal of public expenditures should include consideration of factors related to motor vehicle accidents where public expenditures are in fact reduced. Please understand that we are not advocating the increase of automobile accidents to reduce public expenditures, but we do believe political sensitivity has prevented an open and unbiased analysis of this subject.

As mentioned previously, the study estimated that 1 billion man-hours are expended annually in public compliance with the 55-mile-per-hour speed limit. A salient point that is not altogether clear in that analysis is that that analysis is based on average speeds traveled now versus average speeds traveled in 1973. This is not an analysis between 55 and 70, but rather an analysis of 58.9 mile per hour in 1973 and 55.5 mile per hour in 1982. In other words, the impact upon the individual motorist using the rural interstate system would be five times greater than the example set forth in this study.

To put this in a practical perspective, it should be recognized that the 21-percent difference in speed between 55 miles per hour and 70 miles per hour would result in the loss of 1 full month of productivity for a person traveling 50,000 miles per year. The public statements that the 55-mile-per-hour speed limit only adds a few minutes to each trip may be true, but they are also somewhat misleading.

Mr. GLICKMAN. Mr. Baxter, I hate to do this to you, but——

Mr. BAXTER. Did my bell ring?

Mr. GLICKMAN. Well, it didn't ring but it was supposed to have rung, so see if you can try to summarize.

Mr. BAXTER. I am going to defer the discussion on speed and its relationship to accidents to Mr. Tomerlin, and I would revert to my last section here or two sections on the current status of the 55-mile-per-hour speed limit.

A major flaw of the National Research Council's analysis of the 55-mile-per-hour speed limit is its reliance on data that understates actual highway speeds, overstates the influence of speed limits, and ignores certain realities. For all practical purposes, the 55-mile-per-hour national maximum speed limit no longer exists.

Speed limits are a constraint on vehicle speeds on limited circumstances. Congestion, weather, and/or highway design are often the primary speed constraint. On much of our urban interstate and secondary highway system, posted speed limits are a moot point, as is meaningful enforcement. The commuter on I-94 in Chicago and the farmer on the Kansas county highway travel at speeds they feel are appropriate or those dictated by prevailing conditions. Speed limits as constraints are simply not relevant concerns in these situations.

I am going to jump to my last section on recommendations.

Mr. GLICKMAN. Your page 23, then?

Mr. BAXTER. Is that where it is?

Mr. GLICKMAN. Yes.

Mr. BAXTER. OK. Recommendations: We feel the following course of action would result in significant safety benefits, reduced public expenditures, and widespread citizen acceptance. We would like to see a consortium of Federal and State transportation experts for the purpose of identifying and analyzing factors that impact highway safety as it relates to speed limits. Concerted effort should be focused on those aspects of highway design, traffic density, maintenance, and environmental factors that dictate proper vehicle speeds. The final product of this group's work should be a set of procedures that will aid in the establishment of appropriate speed limits on a wide variety of rural highways.

Second, remove the hidden agendas from speed-limit policies and confine speed-limit objectives to informing motor vehicle operators of the maximum safe speed a highway may be traveled under normal conditions in an average automobile with average operator abilities. Speed limits should not be the mechanism for raising local revenue, controlling land use patterns, stimulating business activity, nor promoting energy conservation. We believe the public first and foremost wants speed limits to reflect the maximum speed a highway can safely be traveled when all relevant factors are considered.

Return speed limit regulation to the individual States and provide technical and financial assistance to employ the new speed limit criteria.

Conduct a public education program that explains the new system of speed regulation and emphasizes the importance of recognizing the new limits as having a rational rather than an arbitrary basis.

We believe these are reasonable recommendations, well within the realm of practicality. Your interest in our concerns and suggestions is much appreciated.

[The prepared statement of Mr. Baxter follows:]

TO:

Representative Dan Glickman
Chairman
Subcommittee on Transportation,
Aviation and Materials

Submitted by:

James J. Baxter
President
Citizens Coalition for Rational
Traffic Laws, Inc.
6678 Pertzborn Rd.
Dane, WI 53529

Subject:

Retention or repeal of the 55 mph National Maximum Speed Limit and an evaluation of the National Research Council Study: "55: A Decade of Experience"

James J. Baxter is President of the Citizens' Coalition for Rational Traffic Laws, Inc., a national organization formed in 1982 for the express purpose of advocating the return of speed limit regulation to the jurisdiction of the individual states. The CCRTL further advocates the establishment of new speed limits based on sound engineering criteria including consideration of highway design, traffic composition, and the state of maintenance.

Mr. Baxter is a state level lobbyist specializing in transportation, utility and natural resource issues with past employment experience in the U.S. Department of Interior and the Wisconsin Department of Natural Resources.

"55: A DECADE OF EXPERIENCE"

A CRITICAL OVERVIEW

In 1982 Congress was confronted with a conflict between those members who wanted to intensify the national committtment to the 55 mph National Maximum Speed Limit and other members who either opposed the law in general, feared their home states would suffer financial sanctions for non-compliance or felt the states should not be strictly held accountable for enforcement of the NMSL. The resulting compromise was a Congressionally mandated study. The authorizing language set the tone of the study:

> "...a comprehensive analysis of (1) benefits, both human and economic, of lowered speeds due to enactment of 55, with particular attention to savings to the taxpayer, and (2) whether the laws of each state constitute a substantial deterrent to violations."

It was never suggested that there were negative aspects affiliated with the NMSL. The tone and underlying assumption was that the 55 mph NMSL is good public policy and one that should be continued. This was hardly the the foundation for a study now being tauted as an objective analysis of the costs and benefits attributable to the 55 mph NMSL.

The Study Committee consisted primarily of persons with a pro-55 bias. Agency administrators who previously or currently promoted and oversaw 55 public relations and enforcement programs, representatives of organizations that have historically supported the law, and recipients of past 55 research contracts were balanced against one published critic of the NMSL. And, while the Congressional liaisons represented appropriate committees, it must be recognized that they also represented staunch and powerful advocates of the 55 mph NMSL (in one case a principal author). Add in a liaison from the agency responsible for promoting the NMSL for the past ten years and it is not unreasonable to suggest the Study Committee was well weighted in favor of retaining the 55 mph NMSL.

As a result of citizen and Congressional interest, a decision was made to investigate, at least where data was already available, some of the frequently mentioned "costs" of the NMSL. Unfortunately, most of the research surrounding this issue is oriented toward proving the law's worth rather than analyzing its negative aspects. Consequently, the cost analysis would require new research, versus re-evaluation of past studies. New research to determine the downside of 55 was apparently not a viable option. (For example, just what are the consequences of adding 20% to the travel time on a rural highway?)

Without disecting the Committee's report page by page, we would like to touch upon the major differences of interpretation.

Does (did) the 55 mph speed limit save lives?

When the 55 mph speed limit was passed in 1974, there were initial claims of 9,000 lives being saved by the law. Later pronouncements scaled the claims down to 6,000 lives saved and the current report estimates 3,000 to 5,000 lives were initially saved.

While we will agree that lower speeds induced by the oil embargo resulted in fewer fatalities, we believe the speed limit's role was limited and overstated. Understated or ignored were certain intangibles such as the American motorist's perception of personal mobility. Available data suggests that the oil embargo had a minimal impact on vehicle miles traveled. Personal experience and perceptions infer otherwise.

In response to an earlier draft we asked, "What are the consequences of people having to spend a billion extra hours on the road? Isn't there an inherent risk in being exposed for a longer period of time?" A simple and admittedly arguable analysis can be performed where these hours of travel time are converted into vehicle miles travelled and would indicate 1,600 additional lives lost. If 55 was more fully complied with, the time lost and lives lost would double. We are not suggesting this is an infallible analysis but the real answer lies somewhere between zero and our worst case scenario. Increased exposure time is a factor in accident occurrence. This subject was never seriously considered in "55: A Decade of Experience."

Physical improvements in the highway environment, improved emergency medical assistance, and other safety initiatives are mentioned but not quantified in any meaningful way.

The embargo induced lower speeds did reduce speed varience and in all probability brought vehicles back down to speeds within the design limits of selected highways. It should be noted that the fatality rate returned to historic trend levels by 1977, despite increasing highway speeds.

Today the 55 mph NMSL saves lives only if the other alternative is an arbitrary return to 1973 speed limits. Realistically, the lasting benefits of the 55 mph NMSL can best be sustained by adopting a more rational system of speed limit regulation (see CCRTL recommended alternative).

Energy Conservation

There is general agreement that the 55 mph NMSL is responsible for approximately a one percent savings in petroleum consumption. During the period of federal regulation of fuel distribution this percentage was considered of minor to minimal importance. In a free market economy it can best be classed as trivial. Product pricing, alternative fuels, shifting to more efficient vehicles already in the marketplace and personal adjustments in travel plans could easily accommodate fluctuations of this magnitude. Some of these adjustments may be temporarily inconvenient but not disruptive of the entire economy.

Personal discretion and individual priorities have in the past and will continue to determine private energy consumption. Supply and demand considerations will determine energy pricing and we believe that outside a national emergency, the individual citizen should have the liberty to determine how much of his or her income to invest in energy resources and how those resources will be personally used. For some, it may mean keeping their home 72° instead of 68°. For others it will be a larger, more versatile automobile versus a compact model. For still others it will be the saving of time in exchange for greater fuel consumption. These are choices we should all be able to make in a free economy.

Taxpayer Costs and Benefits

We fully realize the magnitude and trauma associated with serious motorvehicle accidents. On a personal level the ramifications can be overwhelming. However, much of the debate centering on public policy relates to the economic impact of these accidents on the taxpaying public.

The findings of the Study Committee suggest that it costs more to enforce the 55 mph speed limit than is returned in public benefits (again, we are speaking solely in monetary terms). Expenditures are listed as 120.9 million dollars and tax dollar savings are estimated to be 62.9 million dollars, leaving a 58 million dollar negative balance. However, the committee dismisses this imbalance by suggesting the enforcement efforts are supported by fines levied against persons exceeding the speed limit. They do not give passing mention to the possibility that the fines are just another way of extracting private resources to support a public program. In other words, another tax but one that is applied on the basis of how fast someone drives down a highway. Clearly, those persons forced to contribute to this system would prefer to spend their income in other ways!

Despite our earlier requests and suggestions, no attempt was made to measure the financial and work load impact on the judicial system, the lost or wasted capacity of highways designed for higher speeds, and the negative impacts on higher priority enforcement programs when personnel are diverted to administration and enforcement of the NMSL.

From a purely economic standpoint, we felt an accurate appraisal of public expenditures should include consideration of factors related to motorvehicle accidents where public expenditures are in fact reduced. Please understand that we are not advocating the increase of automobile accidents to reduce public expenditures. But, we do believe political sensitivity has prevented an open and unbiased analysis of this subject. Consider the following examples:

- Persons who die before they can utilize Social Security benefits - after perhaps paying into the program for 30 or 40 years

- Persons, without dependents, who do not survive to enjoy military or civil service pension programs they have participated in

- Persons on long term public assistance whose lives are lost in an accident

- Persons who lost their lives in accidents who would have otherwise suffered dibilitating, long term illnesses in public institutions

- Persons who would be institutionalized for other reasons if not as the result of an automobile accident.

These are not pleasant nor desirable situations but they illustrate the economic fallacy that every person seriously injured or killed in an automobile accident automatically represents a financial loss to society.

Travel Time Increases

As mentioned previously, the study estimated that one billion manhours are expended annually in public compliance with the 55 mph NMSL. A salient point that is not altogether clear is that the analysis is based on average speeds traveled now versus average speeds traveled in 1973. This is not an analysis between 55 and 70 but rather an analysis of 58.9 mph in 1973 and 55.5 mph in 1982. In other words, the impact upon the individual motorist using the rural Interstate system would be five times greater than the examples set forth in the study.

To put this in a practical perspective, it should be recognized that the 21% difference in speed between 55 mph and 70 mph would result in the loss of one full month of productivity for a person traveling 50,000 miles per year. The public statements that the 55 mph speed limit only adds a "few minutes" to each trip may be true but they are also somewhat misleading.

The Chapter on travel time highlights a characteristic of the study that seriously undermines its value as a public policy discussion tool. All comparisons and analyses are made against a backdrop of the 1973 transportation environment. The unspoken inference is that the only alternative that would exist in the place of the 55 mph NMSL is the 1973 scenario. That is not the focus of today's speed limit debate.

There is a significant portion of the driving population and not a small number of public officials who have come to recognize that 55 mph is not an appropriate speed limit for all roads in all places. They want mechanisms employed that will permit rational adjustments in speed limits. The debate is not centered on returning to 1973 speed limits. Contrastingly, this study is dominated and preoccupied with 1973 comparisons.

Public Opinion

As pointed out in numerous references, public opinion polls consistantly show strong support for the 55 mph NMSL. Just as regularly, highway statistics show widespread non-compliance, although it is argued the non-compliance is within tolerable limits.

The surveys most often quoted (Gallup) display a certain shallowness but they do represent the "knee jerk" response given by most people. A moderate amount of probing or the offering of alternatives will dramatically change the percentages registered on the question.

If simply asked, "Do you support the 55 mph speed limit?", 70% to 80% of the respondents will answer in the affirmative. However, if asked "Would you support raising the speed limits in sparsely settled areas and on high quality highways such as the Interstates?", 50% to 60% of the same respondents would say "yes".

In unscientific samples where listeners or viewers are asked to express their opinions, it is not uncommon for 60% to 80% of the respondents to favor full or limited repeal of the 55 mph speed limit.

A decade of public relations efforts have not been without their effect. Most people have been convinced that 55 "saves gas and saves lives". Further, they have accepted commonly publicized myths such as 1) no matter what the limit is everyone will drive ten miles over (a total fallacy) and 2) large trucks and buses exceed the limits by extreme margins and will always do so (another fallacy). By keeping the limits arbitrarily low, they feel these tendencies toward excessive speed can be held in check. There is also a belief among many motorists that repealing the 55 mph speed limit will automatically result in the limits being raised on marginal secondary highways that may already be stressed at 55 mph.

Enforcement

One of the more important contributions of this study is the conclusion that there is no correlation between intensive enforcement and harsh penalties and the reduction of highway speeds or highway accidents. There must be honest public concensus before there can be reasonable public compliance.

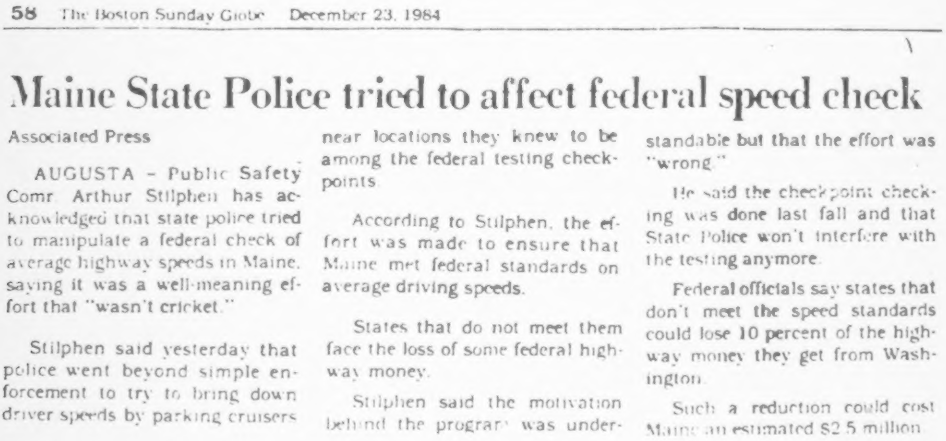
Compliance

One of the most negative aspects of the 55 mph NMSL is the compliance system imposed on the individual states by the federal government. "55: A Decade of Experience" touches on some of the more perverse elements.

To avoid financial sanctions, the states have had to divert enforcement and administrative efforts away from high priority, meaningful projects and programs. This has meant intensive enforcement concentrated on highways with the best safety records, public relations and education dollars devoted to 55 enforcement instead of more important safety programs, the use of enforcement personnel to modify raw data being registered on speed monitoring devices (see article on Maine program), and the manipulation of speed data to underrepresent actual highay speeds.

Unfortunately, the Study Committee's alternate compliance plan addresses the symptoms rather than the disease. We do not need a continuation of the adversarial relationship bred by a compliance program imposed on the individual states and

Example: Manipulation of Speed Data



58 The Boston Sunday Globe December 23, 1984

Maine State Police tried to affect federal speed check

Associated Press

AUGUSTA – Public Safety Comr. Arthur Stilphen has acknowledged that state police tried to manipulate a federal check of average highway speeds in Maine, saying it was a well-meaning effort that "wasn't cricket."

Stilphen said yesterday that police went beyond simple enforcement to try to bring down driver speeds by parking cruisers near locations they knew to be among the federal testing checkpoints.

According to Stilphen, the effort was made to ensure that Maine met federal standards on average driving speeds.

States that do not meet them face the loss of some federal highway money.

Stilphen said the motivation behind the program was understandable but that the effort was "wrong."

He said the checkpoint checking was done last fall and that State Police won't interfere with the testing anymore.

Federal officials say states that don't meet the speed standards could lose 10 percent of the highway money they get from Washington.

Such a reduction could cost Maine an estimated $2.5 million.

enforced through federal financial sanctions. Rather, we need a working partnership that recognizes regional diversity in travel environments and mutually acceptable safety objectives.

ANOTHER VIEW OF SPEED

It has been said so many times that it is never questioned, "Speed Kills!" In and of itself this statement has little merit. Speed does not kill, sudden deacceleration does.

We decided a long time ago that human beings were going to travel faster than we could afford to crash. Our most effective safety measures, past and present, were and are devoted to avoiding the crash. Better brakes and tires, improved road handling, enhanced visibility, and superior lighting are some of the vehicle improvements aimed at accident avoidance. The Insterstate Highway System represents a tremendously successful investment in accident avoidance construction. Another aspect is driver training and education.

Unless extremes are reached that exceed vehicle, highway, and driver limitations, speed and posted speed limits have no positive correlation with accident frequency. In fact, quite the opposite is true:

Roads Posted MPH	Fatality Rate P.H.M.V.M.*
30	12.55
30-35	10.50
40-50	6.51
55**	3.77

Most of the improvement in fatality rates as speed increases is related to design quality of the travel environment. However, there are a host of other factors related to vehicle design and vehicle operator demographics that influence the frequency and severity of motorvehicle accidents.

A great deal has been said about the importance of speed varience versus rates of speed. Highly reputed studies conducted in the late 1950's and early 1960's established the importance of uniform pace on two lane and uncontrolled access four lane highways (Solomon). These findings hold just as true today - on secondary highways. However, the safety implications of uniform pace on limited access divided highways are not as dramatic or clearcut as generalized in the Study Committee's report. The study they cite (Cirrillo, 1968) indicates the safest speed zone was 12 mph above the mean speed. Further, the thrust of the Cirrello study was the measurement of accident frequency in the vicinity of interchanges on both urban and rural Interstates.

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* Per Hundred Million Vehicle Miles

** This is for all roads posted at 55 mph. The rural interstate system with actual speeds of 65 mph has a fatality rate of 1.5.

The importance of uniform pace on limited access divided highways is called into further question when comparisons are made with similar highway systems. There is a very large spread in vehicle speeds on limited access divided highways in West Germany and Great Britain and yet their safety record is comparable to that of our Interstates. There seems reasonable evidence that our Interstate highways could safely sustain a wider variation in vehicle pace than that currently existing. It should also be kept in mind that vehicle pace can also be compressed by raising the minimum speed closer to the mean speed. (Extremely slow vehicles are involved in six times as many accidents as extremely fast vehicles.)

CURRENT STATUS OF THE 55 MPH NMSL

A major flaw of the National Research Council's analysis of the 55 mph NMSL is its reliance on data that understates actual highway speeds, overstates the influence of speed limits, and ignors certain realities. For all practical purposes, the 55 mph National Maximum Speed Limit no longer exists.

Speed limits are a constraint on vehicle speeds under limited circumstances. Congestion, weather, and/or highway design are often the primary speed constraint. On much of our urban Interstate and secondary highway system, posted speed limits are a moot point as is meaningful enforcement. The commutor on I-94 in Chicago and the farmer on the Kansas County highway travel at speeds they feel are appropriate, or those dictated by prevailing conditions. Speed limits as constraints are simply not relevant concerns in these situations.

Making judgements or basing analyses on average speeds is often misleading. For example, if two vehicles, one traveling at 45 mph and the other at 70 mph, are clocked through a speed measurement device, the average will be 55 mph, perfect compliance. However, depending on the circumstances, both vehicles could be traveling at high risk speeds. An actual case in point is the analysis of urban Interstate speeds.

Urban Interstates are reported to be sustaining average speeds equal to those existing prior to the oil embargo and the imposition of the 55 mph speed limit. Averages aside, it is clear that many urban Interstates have become increasingly congested with rush hour speed reduced to 25-35 mph and in some instances chronic stop and go conditions. The only way speed averages can be sustained at 1973 levels is for non-rush hour traffic to exceed speed limits by significant and consistant margins. Yet, urban Interstates have fatality rates lower than any other segment of our public highway system.

If congestion, weather, and/or highway design constraints are not limiting factors, speed limits come into play. This is a situation most likely to occur on our very best roads. Forgetting averages, the pace speeds traveled under these unconstrained circumstances are as follows:

Eastern Seaboard & New England = 60-65 mph
Southeast = 60-70 mph
Ohio River Valley = 60-70 mph
South = 65-70 mph
Great Lakes = 60-65 mph*
Plains = 65-75 mph
Rocky Mountains = 65-75 mph
Southwest = 65-75 mph
California = 65-70 mph
Northwest = 60-65 mph

* Michigan = 65-70 mph

These estimates are based on the observations of CCRTL members, many of whom spend in excess of 1,000 hours per year on our highways. Clearly their observations indicate a national abandonment of the 55 mph speed limit, a phenomenon that will be verified by anyone who regularly travels our highways.

CONTINUATION OF THE 55 MPH NMSL - THE DOWNSIDE

Congress requested and received a study that identified the benefits attributable to the 55 mph National Maximum Speed Limit. While lacking the intensity and breadth of analysis we would have liked, the study also considered "cost" elements associates with the NMSL.

Enforcement costs, additional travel time, and misallocation of enforcement resources were touched upon and discussed. However, there are other negative aspects that were passed over because of data limitations or ignored altogether. We believe these "negatives" added to already discussed problem areas provide compelling justification for elimination of the National Maximum Speed Limit.

- The NMSL with its compliance requirements and financial sanctioning authority has created an adversarial relationship between individual states and the federal government. State officials are forced to exercise policies and programs that are not reflective of their citizens' wishes. Federal officials are placed in the position of threatening the loss of financial aids for non-compliance when in fact they recognize the inappropriateness of trying to apply one speed limit to a diverse highway system. This law has converted a partnership relationship between agencies with identical objectives into a contest of statistical fabrication.

- The warping of enforcement priorities has already been discussed. However, the NMSL compliance requirements can also impact other important policy considerations. For example, some states have problems meeting compliance requirements because much of their secondary highway system is posted at speeds below 55 mph. Consequently, these highways are not included in compliance measurements. This leaves only the highspeed, primary system that consistantly carries traffic in excess of 55 mph. One of the few options available is to raise the limits on secondary roads to 55 mph and bring them into the compliance system. Needless to say, these states would be hard pressed to drop speed limits on secondary roads if such a move would jeopardize their compliance standing. Therefore, we have states basing speed limit decisions on NMSL compliance requirements rather than design and traffic conditions.

- There is considerable discussion regarding the raising of the NMSL to 65 mph on rural Interstates. While this would alleviate the pending compliance crises, it creates new problems and fails to address current ones. First, when speed limits have an arbitrary basis which by definition a NMSL has, maximums become minimums. This means certain highways will be posted at speeds that may only be appropriate under ideal conditions. This situation even exists in some instances with the 55 mph NMSL. The impression is that when the federal government assumes the role of setting maximum speed limits, the states de-emphasize their involvement. Consequently, the "fine tuning" to address local circumstances may not be implemented.

A 65 mph NMSL on rural Interstates would eliminate the disparity between actual and posted speeds in many regions of the country. It would not be adequate to meet travel preferences in the Plains, Rocky Mountain and Southwestern regions and selected states where higher speeds have been the rule. Conversely, it may be excessive for older highways experiencing heavy travel.

Although the debate has centered on rural Interstates, the disparity between posted and actual speeds extends to higher quality two lane roads, especially in the sparsely populated western states. A 65 mph NMSL confined to rural Interstates will not address this situation.

- Citizen support for the 55 mph NMSL has consistantly been touted as one of the reasons the law remains in effect. However, if stringent enforcement was feasible this support would quickly dissipate. A three-fold increase in speeding citations and a thriving multimillion dollar radar detector industry indicate a substantial body of opposition to the NMSL. In a survey of radar detector owners, 75% said their prime motivation for purchase was the 55 mph speed limit.

To suggest, as the National Research Council does, that there is not a growing resentment toward this law and the people responsible for its enforcement is to ignor obvious trends toward deliberate and consistant non-compliance.

- The use of financial sanctions is at best a counter-productive safety measure. Withholding funds that will unquestioningly improve highway safety for the purpose of forcing compliance or at least the pretense of compliance is irrational.

Physical improvements funded by federal highway funds characteristically result in 30% to 60% reductions in highway accidents at specific construction locations. It is indefensible that a state be denied these funds because its citizens will not comply with an arbitrary speed limit.

Returning To State Control

Until 1973 the states controlled their speed limits with varying degrees of attentiveness. As with many other aspects of highway safety, there have been significant changes in state level programs over the past 11 years. It is not reasonable to assume that the states would automatically revert to pre-1974 speed limit policies if given the opportunity to establish their own speed limit regulations. It is logical they would employ the knowledge and sophisticated practices they have accummulated over the past decade. Ideally we would witness the establishment of new speed limits that reflect sound engineering criteria and the preferences of state citizens.

Our preference for state level control is not based on ideology. There are sound pragmatic reasons for returning speed limit regulation to the individual states.

- The states are currently responsible for all aspects of their rural highway systems, from construction to enforcement. It seems only reasonable that their direct involvement and control puts them in the best position to determine appropriate speed limits.

- State control would eliminate the waste, misallocation of resources, and distortion of transportation related statistics currently the product of the NMSL compliance system.

- State based speed limits can be readily adjusted to accommodate changes in local or regional conditions.

- The argument has been made that we should have one uniform national speed limit as is common in other countries. We have several states that are larger than many countries and have extremely diverse travel environments. State based speed limits can accommodate this diversity; One national limit cannot.

- With state control will come greater public input and with greater public input will come consensus and public compliance.

RECOMMENDATIONS

We feel the following course of action would result in significant safety benefits, reduced public expenditures, and widespread citizen acceptance:

1. Form and fund a consortium of federal and state transportation experts for the purpose of identifying and analyzing factors that impact highway safety as it relates to speed limits. Concerted effort should be focussed on those aspects of highway design, traffic density, maintenance and environmental factors that dictate proper vehicle speeds. The final product of this group's work should be a set of procedures that will aid in the establishment of appropriate speed limits on a wide variety of rural highways.

2. Remove the "hidden agendas" from speed limit policies and confine speed limit objectives to informing motorvehicle operators of the maximum safe speed a highway may be travelled under normal conditions in an average automobile with average operator abilities (in contrast to the lowest common denominator policy now in force). Speed limits should not be mechanisms for raising local revenue, controlling land use patterns, stimulating business activity nor promoting energy conservation. We believe the public, first and foremost,

wants speed limits to reflect the maximum speed a highway can safely be travelled when all relevent factors are considered.

3. Return speed limit regulation to the individual states and provide technical and financial assistance to employ the new speed limit criteria.

4. Conduct a public education program that explains the new system of speed regulation and emphasizes the importance of recognizing the new limits as having a rational rather than an arbitrary basis.

We believe these are reasonable recommendations well within the realm of practicality. Your interest in our concerns and suggestions is very much appreciated.

On behalf of the members of the Citizens Coalition For Rational Traffic Laws, Inc.:

James J. Baxter
President

(Note - citations and reference will be provided upon request)

Mr. GLICKMAN. Thank you, Mr. Baxter.

Mr. Tomerlin.

STATEMENT OF JOHN TOMERLIN, HIGHWAY AFFAIRS ANALYST, ROAD & TRACK MAGAZINE

Mr. TOMERLIN. Thank you, Mr. Chairman, members of the committee. I will depart considerably from the full record of my text that you have there and summarize some of it.

I would like to state first of all that for the past 7 years Road & Track has funded research and study on a full-time basis into various highway safety issues, including the 55-mile-per-hour speed limit and the relationship of speed in general to safety. This has at least one advantage, in that I have been able to study the reports and data from State agencies and local enforcement agencies in addition to the data that is disseminated by the NHTSA.

I think that I am going to depart from what has been said here today by many of your presenters in two key regards. One is in the relationship of speed to safety per se, and the second is in the quality of the data upon which much of the 55-mile-per-hour 10-year decade report was based.

In my reading of the report, it says rather clearly that there is a direct causal relationship between speed and safety, and based on just that part of the equation it credits from a quarter to a half of the total reduction of fatalities in 1974 to a 55-mile-per-hour speed limit.

The report relies on three basic assumptions: One, that speed limits are effective in reducing highway speeds; that reducing speeds reduces accidents, and that reducing speeds reduces fatalities.

First of all, are speed limits effective in reducing highway speeds? Traffic engineers have long known that neither posted limits nor the level of enforcement are primary factors in determining speed behavior. Julie Cirillo, whose work is referenced in the report, studied data from 20 State highway departments for the Federal Highway Administration and concluded, "the level of enforcement has little or no apparent effect on the mean speed or the accident experience of the study section." Donald Cleveland of the University of Michigan's Highway Safety Research Institute observed, "It appears that drivers respond favorably to reasonable speed limits and disregard those that are unreasonably low."

The Transportation and Traffic Engineering Handbook of the Institute of Traffic Engineers contains this quote: "The consensus of traffic engineers in the United States is that motorists usually adjust their speeds according to conditions on the road and not necessarily to posted limits." Enforcement officials in many parts of the country testified to the inability of posted limits to govern traffic behavior except during periods of intensive enforcement. When the California Highway Patrol deployed 40,000 additional patrols in an effort to reduce speeds on four heavily traveled interstates in 1982, they succeeded in reducing noncompliance with the 55-mile-per-hour speed limit from 78.2 percent to 74.7 percent, and they learned that the effects of enforcement diminish within 1 to 2 days.

If posted limits are ineffective, gentlemen, and enforcement has only a temporary effect on reducing speeds, and if there is only 1 active patrol car for every 190 miles of the interstate system, what exactly was the mechanism through which a national maximum speed limit caused 75 million motorists to slow down in 1974?

Does reducing speed reduce accidents, and does it reduce fatalities? The committee has answered yes and explained the causal factors: increased reaction time; reduced ability to steer around some turns; longer braking distances; greater severity of accidents at higher speeds. And yet for the last 30 years, as has been noted in this hearing today, the average speeds in this country have been rising about one-half mile per hour per year, and in that same period of time the mileage death rate fell from about 10 fatalities per 100 million vehicle miles to about 4.

Dr. B.J. Campbell of the Highway Safety Research Institute, University of North Carolina, has researched traffic records and identified eight primary causes of accidents, among which speed ranks eighth and last. Matthew Sielski of the Michigan Automobile Club, after analyzing records of thousands of crashes in Midwestern States concluded that "speed too fast for conditions"—not merely in excess of posted limits—can be considered the primary causal factor in fewer than 5 percent of all fatal accidents. Obviously, alcohol is the leading cause. We are fortunate that this is so because if it were not, the only alternative would be to set limits much lower than 55 so that it would be comparatively safe to follow the car ahead too closely, to make improper lane changes, turn in front of oncoming traffic, and all of the other things on Dr. Campbell's list.

In fairness to the committee it should be mentioned that they received some very low-grade information with which to work, and I would like to call that to your attention in particular. Early estimates of the benefits of 55 made by NHTSA were tendentious and misleading. The study by Cerrelli in 1977 claimed 6,000 lives saved, neglected to include the effects of economic recession, and yet that 6,000 figure was repeated by NHTSA for years.

A 1980 study by Johnson, Klein, Levy, & Maxwell estimated that the speed limit alone accounted for 10,400 fewer fatalities. Inasmuch as there had only been 9,100, they were somewhat embarrassed, I think, by that report, or should have been. Other studies referenced in the report range from a high of 6,000 to a low of 3,200 to the committee's own 2,000 to 4,000 figure, all based on little more than the premise that speed kills.

State reports on speed and speed compliance are equally unreliable today. California was allowed to apply a formula of its own devising in 1980, and thereby lowered its estimate of traffic exceeding 55 by 17 percentage points. This formula was so popular that most of the other States have now adopted it, and I understand it results in approximately 14 percent underestimation today across the board of State speed behavior.

A factor for speedometer error gives the States credit for lower than actual speeds to account for drivers who unknowingly exceed the limit because of inaccurate speedometers. Road & Track tests a large number of automobiles every year, has done for many years, calibrates each for speedometer error. We find that in the past few years today's cars are accurate to within 1 to 3 miles per hour at 60 miles per hour, and as many err on the high side as on the low, and yet the States are allowed to deduct upwards of 4 miles per hour from actual speed behavior for this purely mythical factor.

Another 3 to 7 percent reduction is permitted for possible sampling error. According to the FHwA, the average real speed on rural interstates—as you have heard today from Mr. Altshuler—is 59.1 miles per hour, but a summary from the Traffic Association of Michigan admits to an average speed in 1984 of 63.1 miles per hour in that State, an 85th percentile speed of 69.5 miles per hour, and a percentage exceeding the national speed limit of 90.8 percent. Incidentally, fatalities on Michigan's rural interstates fell from 92 in 1980 to 44 in 1983.

The fact remains, however, that traffic did slow down in 1974. Fatalities declined by 17 percent. Part of this reduction, as you have heard today, was attributable to less mileage; part was due to economic decline; part of it was due to the curtailment of certain types of nonessential driving. The remaining and largest part of the decline was due to reduction in speed variance.

When gasoline supplies were threatened and—more importantly, perhaps—when the cost of fuel doubled, American motorists slowed down. Variance decreased significantly. So did accidents and deaths, as they would have done had the national speed limit been 60 or 65 or 50.

Only one member of the committee appears to have understood the full significance of this point. Dr. Charles A. Lave wrote, "First, there is no statistically significant relationship between speed and fatality rate. Second, there is a statistically significant relationship between speed variance and the fatality rate. Third, there is no statistically significant relationship between the fatality rate and any other speed variable."

It has been mentioned here earlier that the speeds have risen far beyond what they were in 1974, and I think that's true. I think that the committee's conclusion that 80 percent of the speed reduction has been retained is naive and false.

Another point that I think the committee already understands is that one of the basic decisions in the 20th century regarding transportation—and the motif of this room illustrates it very well—is the decision to travel faster than we can afford to crash. It's true not only of the space age, it's also true of jet planes, it's true of trains, and it's true of automobiles.

In order to control safety through speed, you will have to set a very much lower than 55-mile-per-hour speed limit, inasmuch as 80 percent of the Nation's fatalities today occur at speeds of 40 miles per hour and less. The proper approach is a systemic approach allowing speeds set according to the 85th percentile, vigorously enforced above that limit, and that cannot be done so long as we insist that speed is directly related to fatalities within our highway system. It is not, and the report proves it.

[The prepared statement of Mr. Tomerlin follows:]

ROAD & TRACK

55: THE SECOND DECADE

by

John Tomerlin
Highway Affairs Analyst, Road & Track Magazine

"55: A Decade Of Experience" is a thorough and closely reasoned iteration of a well-known premise: Speed kills. It invokes the passage in 1974 of a national maximum speed limit; analyzes the reduction in fatal accidents that occurred at that time; and concludes that there was a direct causal relationship.

The authors of the Report concede that other factors may have influenced the reduction in fatalities to a greater or lesser degree, but after examining and quantifying these factors it credits from one-quarter to one-half of the total reduction to the 55-mph speed limit.

Perhaps one should not quibble. Throughout the latter half of the 1970s, and into the early years of this decade, the National Highway Traffic Safety Administration (NHTSA) claimed from two-thirds to three-quarters of the reduction was caused by the speed limit--and did so, for the most part, on the basis of the same data and studies that were used by the committee.

It would be convenient to accept the lower estimate--to give that much credit, at least, for the considerable amounts of time, energy, money and good intentions that have been expended in behalf of the nmsl--and to get on to

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other matters.

The problem with this is that the underlying premises, the data used to support them, and the conclusions drawn therefrom, all are in error.

Those portions of the report which deal with safety rely on three basic assumptions:

(1) Speed limits are effective in reducing highway speeds,

(2) Reducing speeds reduces accidents, and

(3) Reducing speeds reduces fatalities.

If any one of these assumptions is wrong--if speed limits do not reduce highway speeds, or if lower speeds do not reduce accidents or result in fewer fatalities--then the committee's entire analysis of the national maximum speed limit falls of its own weight.

In fact, all three are wrong.

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Are speed limits effective in reducing highway speeds? It's popularly supposed that they are, and for a very good reason. We are overwhelmingly a law-abiding and law-respecting people; we do not like to drive more than about 5 mph above the prima facie limit, and it's possible that we do so only because traffic officials so often set the limits about 5 mph too low.

Most people are surprised, therefore, when they find traffic moving 10 and even 15 mph above the legal limit on freeways and Interstates.

There is at least one group of professionals that is not surprised. Traffic engineers have long known that neither posted limits nor the level of enforcement are primary factors in determining speed behavior.

Julie A. Cirillo, whose work is referenced in the Report, studied data from 20 state highway departments for the Federal Highway Administration (FHwA), and concluded that "the level of enforcement has little or no apparent effect on the mean speed or on the accident experience of the study section."

Donald E. Cleveland of the University of Michigan's

Highway Safety Research Institute (now the Transportation Research Institute), made a wide-ranging study of safety literature for the Highway Users Federation, and observed, "It appears drivers respond favorably to reasonable speed limits and disregard those unreasonably low."

The Transportation and Traffic Engineering Handbook of the Institute of Traffic Engineers contains this quote: "The consensus of traffic engineers in the United States is that motorists usually adjust their speeds according to conditions on the road and not necessarily to posted limits."

Enforcement officials in many parts of the country testify to the inability of posted limits to govern traffic behavior except during periods of intensive enforcement. The Report references efforts by the California Highway Patrol to reduce speeds on four heavily traveled Interstates during 1982. Some 40,000 patrols were deployed along these routes, where they succeeded in reducing non-compliance from 78.2 percent to 74.7 percent.

They also learned that "the effects of enforcement diminish rapidly when the patrols are removed, usually completely within 1 or 2 days."

There is much more of this kind of thing in the Report, including several repetitions of the fact that there seems to be an inverse realtionship between enforcement and speed behavior. For example: "...in the states with the greatest compliance problem, more citations are issued, which appears to indicate that issuing citations does not deter speeding."

If posted limits are ineffective in governing speed behavior; and enforcement has only a temporary effect in reducing speeds; and if there is only one active patrol car for every 190 miles of the Interstate system (according to the Report)--what, exactly, was the mechanism through which a national maximum speed limit caused 75 million motorists to slow down in 1974?

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Whatever the answer to this question may be (and there is a single answer; one to which we will return), two equally important questions remain. Does reducing speed reduce accidents, and does it reduce fatalities?

The committee answered yes to both questions. It cited as proof the sharp reduction in fatalities in 1974, and explained the causal factors: increased reaction time; reduced ability to steer around some turns; longer braking distances; and greater severity of accidents at higher speeds.

All four points are technically correct. But in the context in which they are used--to account for a fairly dramatic decline in highway deaths--they are almost completely inadequate.

For at least 30 years prior to the national maximum speed limit, average highway speeds in this country rose by more than one-half mph per year. During that period, an overwhelming majority of motorists learned to make proper allowances for reaction times and braking distances, and to remain on the road while cornering. During those 30 years, the mileage death rate fell from nearly 10 fatalities per 100 million miles to about four.

Adjustments for speed could not have been responsible for more than a small part of the improvement, however. Dr. B.J. Campbell, of the Highway Safety Research Institute of the University of North Carolina, has researched traffic records and identified eight primary causes of accidents, among which speed ranks eighth and last.

Matthew C. Sielski of the Michigan Automobile Club, after analyzing records of thousands of crashes in midwestern states, concluded that "speed too fast for conditions," and not merely in excess of posted limits, can be considered the primary causal factor in fewer than 5 percent of all fatal accidents.

We are fortunate that this is so. If it were not, the only alternative would be to set limits much lower than 55, so that it would be comparatively safe to follow the car ahead too closely; to make improper lane changes; to turn in front of oncoming traffic; and the various other "undesireable actions" on Dr. Campbell's list.

This theoretical speed would have to be very low, inasmuch as federal data indicate that 80 percent of all fatal accidents occur at 40 mph or less.

Fortunately, this is not the only option; because the committee's assumption that speed per se had, and has, a major causal relationship to fatal accidents is false.

One of the best-known proofs of this is contained in the Report itself. It is the study by David Solomon, later expanded by Julie Cirillo--both of the FHwA--of many thousands of accidents on rural and Interstate highways.

Both studies show that fewer fatal accidents occur to cars moving 10 mph above the mean speed of traffic than at any other speed; and that cars moving 10 mph under the mean speed of traffic are 3 to 5 times more likely to be involved in such an accident.

Faced with such information the committee nonetheless concluded that raising the speed limit on rural Interstates by 10 mph would result in 500 additional fatalities each year. That is, there would be a 25 percent increase in deaths on just those highways which already enjoy the lowest percentile death rate, not only in this country but in the world.

Perhaps nothing else in the Report shows quite so clearly the committee's exaggerated view of the importance of speed alone.

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In fairness to the committee it should be mentioned that they received some very low grade information with which to work.

Early estimates of the benefits of 55 made by the NHTSA were tendentious and misleading. The referenced study by E. Cerrelli in 1977, claiming 6000 lives saved, neglected to include the effects of economic recession in 1974-75--a factor that even then was known to have a significant impact on the highway death rate.

A 1980 study, also referenced, by Johnson, Klein, Levy and Maxwell, indicated that there was a "statistically significant relationship between the speed limit and fatalities, and estimated that the speed limit alone accounted for 10,400 fewer fatalities in 1974. Inasmuch as there had been only 9100 fewer deaths reported that year, this position was difficult to sustain.

NHTSA returned to the drawing board, so to speak, and constructed a "measure of the trend in safety based on the declining fatality rate" (in other words, the reduction that would have been expected based on historical trends), and modified their estimate to 7500 lives.

Other studies referenced in the Report range from a high of 6000, to a low of 3200, to the committee's own "2000 to 4000" figure--all based on little more than the premise: "speed kills."

A second source of information, namely state reports on speed and speed compliance, is equally unreliable. When

California was allowed to apply a formula of its own devising to its 1980 compliance data, it lowered its estimate of traffic exceeding 55 mph by 17 percentage points--from 61.7 to 44.5.

This formula was so much admired that it has been adopted by most other states, resulting in an across-the-board reduction of about 14 percent.

Nor is this the only adjustment that is permitted. A factor for "speedometer error" allows the states to report even lower speeds to account for drivers who "unknowingly exceed 55 mph because of an inaccurate speedometer." Road & Track tests a large number of new cars each year, and calibrates each for speedometer error. Our results show that speedometers in today's cars are accurate within 1 to 3 mph at 60 mph, and that as many err on the high side as low. Yet the states are allowed to deduct upwards of 4 mph for this purely mythical factor.

Another 3 to 7 percent reduction is permitted for possible sampling error. The committee claims that 37 states presently are out of compliance on the basis of actual, not calculated, speeds. Even this may be an underestimation.

According to the FhwA, the average real speed on rural Interstates in 1983 was 59.1 mph. But a summary from the Traffic Safety Association of Michigan, (not included in the Report) admits to an average speed of 63.1 mph, in that state, with an 85th percentile speed of 69.5 mph, and a percentage exceeding the nmsl of 90.8 percent.

(The Association also mentions that while speeds were increasing, fatalities on the rural Interstates fell from 92 in 1980 to 44 in 1983.)

All things considered, the committee's assertions that "speeds on main rural highways remain well below the levels of 1973," and that "80 percent of the reduction in average speed has been retained," seem a bit naive.

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Traffic did slow down in 1974. Particularly dramatic was the reduction in the percent of drivers exceeding 65 mph on rural Interstates, which declined from 50 to 9 percent that year. Fatalities also declined by 17 percent.

What connection is there between these two facts?

Part of the reduction was attributable to fuel shortages and fewer miles traveled. The committee accepts the figure 1.45 percent as the amount of reduction in travel; but that number is based on antiquated measuring techniques. Automated counters recorded a 2.87 percent decrease, and toll-road travel--where counts are particularly accurate--declined 7.5 percent that year.

Part of the reduction was due to economic decline and a curtailment of certain types of non-essential driving associated with higher accident and fatality rates.

The remaining, and doubtless largest part of the decline was due to reductions in speed variance.

The crucial role of variance--which is a measure of the difference between the highest and lowest speeds traveled on a given road--has been known for 20 years. Its importance was identified in the studies by Solomon and Cirillo, and it is the basis for setting speed limits that reflect the 85th percentile. When the variance is low--that is, when most traffic moves at or near the same speed--accidents rates decline.

This is what happened in 1974.

When gasoline supplies were threatened, and--more importantly, perhaps--when the cost of fuel doubled, American motorists slowed down. Many of them slowed to, or near, 55 when it became the law of the land. Variance decreased significantly, and so did accidents and deaths--as they would have done had the limit been 60 or 65 mph.

Only one member of the committee seemingly understood the full significance of this point. Dr. Charles A. Lave, professor of economics at the University of California, Irvine, wrote:

"First, there is no statistically significant relationship between speed and the fatality rate. Second, there _is_ a statistically significant relationship between speed variance...and the fatality rate. Third, once the effect of speed variance is held _constant,_ there is no statistically significant relationship between the fatality rate and _any other speed variable."_ (Emphasis added.)

Long after the rest of "55: A Decade of Experience" has achieved the oblivion it deserves, Dr. Lave's words will continue to serve as a guidepost to greater highway safety.

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Mr. Glickman. Thank you for an excellent statement. I thank all the witnesses.

First of all, I would like to point out to Ms. Claybrook, on page 5 of her testimony she said, "The major source of pressure for increasing the speed limit comes from truckers who want to drive at higher speeds." I would just point out that I have polled the members of this committee and I am unaware of that particular pressure.

As we talk to people in our part of the country, not just truckers but average, ordinary citizens, there is a great deal of what I call "commonsensical" concern as people drive down interstate highways with nobody on them, who cannot understand why the speed limit ought to be the same on that road as it is on a two-lane road that's curvy and hilly and in another geological or geographical location. So I think that the pressure or the interest comes from a kind of an intuitive common sense from a lot of folks in this country, rather than just truckers who may have an economic reason to want to drive faster.

Ms. Claybrook. Perhaps I should have said "organized." That's really what I mean, organized pressure, but I would point out, Mr. Chairman, if you have highways that don't have any traffic on them, perhaps we shouldn't have ever built them.

Mr. Glickman. But that is an unreasonable——

Ms. Claybrook. That's more of a waste of money than almost anything else.

I know that there are individuals who would like to go 70 miles per hour on rural interstates. There is no question about that.

Mr. Glickman. They already do.

Ms. Claybrook. And they do in a number of instances. However, there are not many people who go over 70. There certainly used to be 15 years ago. The number of people who go at high speeds on the rural interstates, as well as on any other highways, is drastically down. That certainly is, the speed variance certainly is one of the major things that has changed.

Mr. Glickman. The speed variance——

Ms. Claybrook. That's right.

Mr. Glickman. Which is the differential of speeds.

Ms. Claybrook. The differential, that's right. I disagree, and I don't think there is any evidence to show that if the speed limit had been set at 65 you would have also reduced speed variance. That's what it used to be and there was a large speed variance, so I think that one of the major accomplishments of 55 has been that people are not going at the very high speeds.

A lot of people don't like to drive—just like some like to drive at 70, a lot like to drive at 55, particularly our older population, and we are an aging population in this country. They don't like to drive over 55, find it very difficult to drive over 55.

Mr. Glickman. I think, though, it needs to be mentioned that if you look at the statistics over the last 40 to 50 years, the fatalities per miles traveled have been declining at a rather stable, consistent, continuous rate. The slight glitch that existed was in 1974, which I think Mr Tomerlin talked about, and then that rate has continued at roughly the same rate as it did before 1974, which leads me to another question.

Mr. Tomerlin, based upon your testimony, I think what you are saying is that there is really no conclusive scientific evidence one way or another that speed is the determining factor of fatalities on our highways. Is that a fair summary of what you said or not?

Mr. TOMERLIN. According to two of the studies that exist—and I have criticized the data, I think much of the data is very sketchy, I think the VARS data was very low-grade for various other reasons—as far as the studies that I would find to be statistically significant, I think the ones done by Solomon and Cirillo would be the ones I would depend on. They indicate that traveling slower than the average speed of traffic is far more dangerous than traveling at or slightly above that speed.

I would suggest also in response to Ms. Claybrook's remark that, inasmuch as 90-some-odd percent of people on rural interstates are now exceeding the speed limit, that rather than eliminate those roads, perhaps we should have more difficult licensing standards and reduce some of that 10 percent that represents a very great hazard.

Mr. GLICKMAN. Let me ask you this question: On the basis of the various studies on highway safety, do you think that raising the speed limit to 65 miles per hour on nonurban, limited-access highways would result in a significant increase in fatalities?

Mr. TOMERLIN. No one, the speed limit is, as I pointed out, somewhat irrelevant in establishing speed behavior. I think if you raise the limit, what you're doing is recognizing what is happening on the highways. From that standpoint the answer is no.

To go further and to point out that this estimate of 500 additional fatalities would occur if you raised the speed limit to 65, what the report has said is, you would have a 25 percent increase in fatalities on highways that are the safest in the world, not just in this country. Those highways have a death rate now of about 1.5. To suggest that that would increase 25 percent by raising speed limits to reflect actual behavior I think is fatuous.

Mr. GLICKMAN. I was going to go down the list. I wonder if Ms. Claybrook would answer the same question that I just asked, which is, do you think that raising the speed limit to 65 miles per hour on nonurban, rural portions of interstate highways would result in a significant increase in fatalities?

Ms. CLAYBROOK. My belief is that it would, Mr. Chairman, and that's really the essence of my statement. I think there are a number of factors that would cause that. First of all, while it is true, as Mr. Tomerlin says, that people are not driving at exactly 55, the fact that people are going 56 or 57 does not mean they are going 65.

In fact, that is one of my criticisms of the existing measurement criteria, that it talks about the number of people exceeding 55. It doesn't talk realistically about the number of people who are going above some mild variance from 55. Most police do not arrest people unless they're going over 60. Whether the speed limit is 40 or whether it's 50 or whether it's 60, there has always been an allowance of about 5 miles per hour by the police before you get arrested, both because of the measurement machines that they have and also because of speedometer variances. They don't want to have that be part of a challenge, and what they're really looking for are the real speeders.

So there always is going to be—regardless of whatever the speed limit is—there always is going to be people who go a few miles an hour over it, and I don't think that that's a cause for concern, nor do I think that ought to be the basis on which we set our public policy. The key issue is if you go 65 or 70 versus 55, will you have an increase in deaths? I don't think that there is any question but that that is the case, because of the differential in variances, because of the influence on behavior on other highways, because of the lack of respect or presumption that 55 is basically the speed limit, which now you can't excuse any behavior on the basis that you don't know what the speed limit is, and on the basis that older people just simply can't handle cars at the higher speed, and in addition because you really can at a—if you're going 55, you always slow down before the Delta V.

Mr. Tomerlin mentioned 40 miles per hour, 80 percent of the fatalities occur at that. That's not what NHTSA has in its VARS data. It says that 35 miles per hour is the median at which deaths occur, and so the figure is certainly higher than that, but you're talking about a Delta V—that is the actual moment of impact—and that is generally 5 to 10 miles per hour below the actual speed that you were originally going.

Mr. GLICKMAN. OK. I am going to stop because we have a whole new panel and we have to be out of this room at 1:30, but I would again raise the point—all this is interesting—I think this has to deal—the other Members will ask questions but I just want to say again that I think the philosophical aspects of who should regulate auto safety and various parts of auto safety have to be factored into this consideration.

One of the things I have talked about here is, nobody is going to mandate what the States are going to do. The question is, should the States have the authority to come back into the speed limit game at all, and I don't say "game" from a gamesmanship point of view but from their ordinary responsibilities, or are we talking about something that is such a Federal responsibility now that the States should not have any role at all any more? I think that's the fundamental policy question for Congress and one that—I mean, obviously safety and energy plays into that role—but I think that's the one that we have to make a decision on here.

Let's see. Mr. Lewis?

Mr. LEWIS. Ms. Claybrook, were you involved in highway safety and highway speed prior to 1974?

Ms. CLAYBROOK. Yes. I first got involved in 1966.

Mr. LEWIS. What was your role?

Ms. CLAYBROOK. I worked in the Congress for Congress for Congressman Jim Mackie of Atlanta, GA and subsequently for Senator Walter Mondale of Minnesota during enactment of the legislation that now governs the National Highway Traffic Safety Administration, both the Motor Vehicle and Highway Safety Acts. In 1966 I then went to work as the Special Assistant to the Administrator of the National Highway Traffic Safety Administration, which I did for 4 years, and then I came back to work at the NHTSA in 1977.

In between I worked on a number of pieces of legislation dealing with the subject.

Mr. LEWIS. I notice in your statement—and maybe it was on purpose—there are a number of—are you generally making a statement that the speed limit should be 55 maximum on all roads and highways in this country?

Ms. CLAYBROOK. That's my belief. I think that that's proper. I think the question just raised by the chairman of whether or not this should be a Federal policy or a State policy, I think if you look at all other nations of the world or virtually every other nation of the world, they don't have differential speeds in the same country, they don't have differential licensing policies in the same country. We have a very unique relationship here between our Federal and State regulatory arrangements, in part because of our Constitution. This has been traditionally, because of the way our country developed, traditionally a State function.

Mr. LEWIS. You're not suggesting we change the Constitution?

Ms. CLAYBROOK. No, I'm not, but the 55-mile-per-hour speed limit was enacted taking that into consideration, in which it said that it is because of interstate commerce, because people don't stay in one State, everyone travels across State lines all the time. We are now a Nation where we hit each other's border's constantly——

Mr. GLICKMAN. Would the gentleman yield?

Mr. LEWIS. I would yield.

Mr. GLICKMAN. Let's be honest. The 55-mile-per-hour speed limit was adopted for one reason, and that was because we were victimized by shortages of petroleum, and the safety issues have come in as an afterthought, as a way to retain this. I just think that needs to be made clear because I don't think there is any question that on an energy issue, that is an issue of interstate commerce where we all are in this together.

Ms. CLAYBROOK. Well, I certainly agree with you, Mr. Chairman, but I think if you talk to Congressman Jim Howard, who is the chairman of the Public Works Committee, who is one of the authors of the original law, that its reenactment in 1975 after the safety benefits were clear, it's obvious that that was certainly a factor and continues to be a factor in his support for it. I would also point out that in 1968 the NHTSA put out a proposed rulemaking for a national maximum speed capability of vehicles. Now this was a different proposal, raising the question about whether or not the safety factors were so compelling that it ought to be enacted, and when the administrations changed it never was acted on.

But I think that there is certainly a question that we can't ignore, and that is that we do have interstate commerce with personal passenger driving and certainly with trucks, and that the issue of whether or not we ought to have national laws on traffic safety is not one that can be ignored.

Mr. LEWIS. Well, let me ask you, who should establish the speed limit on a 2-lane, 20-foot, 18-foot highway, high-crowned, with a lot of hills and valleys and curves in it, the Federal Government or the State?

Ms. CLAYBROOK. Well, I think that it can be either one. The concept of the national maximum speed limit was a top limit. It says that because the Federal Government funds the interstate highway, which is where most of the——

Mr. LEWIS. I know what all of that says.

Ms. CLAYBROOK. Right. OK. Because it is where high-speed travel occurs, we will set a maximum limit because of the importance of saving lives and fuel economy, and then the States can set the laws underneath of that. I mean, there could be national standards, as there are in most other countries of the world, for all roads.

Mr. LEWIS. I just want to ask you one general question, and answer me yes or no: Should the Federal Government regulate the speed limit of 55 or should that be left to the States?

Ms. CLAYBROOK. I believe——

Mr. LEWIS. If you can, answer it yes or no.

Ms. CLAYBROOK. I believe, as my statement says, there ought to be a Federal national speed limit, maximum speed limit.

Mr. LEWIS. Thank you.

Mr. GLICKMAN. Thank you.

Mr. Reid.

Mr. REID. One of the things that no one has talked about, at least in my State, and I can see my highway expert who directs all that happens on the highways in the State of Nevada in the audience, you know the interstates are falling apart all over the country.

Ms. CLAYBROOK. That's right.

Mr. REID. This is something we hear, but yet I hear people get up here today and say, "Well, highways are getting better. They're banked." I haven't seen any of them. Does anybody know where they are, these fancy new highways that have come about in the last 10 years.

Ms. CLAYBROOK. No, you are correct about that. There is a major problem with repair of interstate highways.

Mr. REID. Isn't this—I mean, does anyone disagree with me on the panel, that the highways, interstates especially and it's even to probably a larger degree with those highways where the States are more responsible, they just aren't in very good shape. Is that a fair statement?

Mr. BAXTER. Mr. Reid, I would have to disagree, at least in the very localized situation in the State of Wisconsin. We have seen significant improvements in our interstate system over the last 2 or 3 years, partially because of improved funding from local increases in our State gas tax as well as anticipation of getting the money from the Federal Government.

Mr. REID. We'll sure check that out because that's unique. Maybe Wisconsin is getting more than their share.

Mr. BAXTER. No. We're one of the States that's on the 85 percent guarantee of what we put in.

Mr. REID. So you think that the highways have improved during the last 10 years?

Mr. BAXTER. I think that yes, there have been improvements in the highways in the last 10 years in a number of ways. One is, we have extended and worked towards the completion of the interstate system. That is something that has been done over the last 10 years. Yes, we have had other highways go into a degree of deterioration, as they might naturally do so, but we have seen improvements not only in our interstate system but also in our secondary system. There have been improvements in shoulder, improvements in pavement, obstacle removal, not just on the interstate system but on our secondary highways as well.

Mr. **Reid**. Well, you know, then we're being fed a pretty good line here in Congress because you know one of the battle cries from the contractors and from the labor unions is that our infrastructure is falling apart, and number one on that list all the time is highways. You disagree with that?

Mr. **Baxter**. Well, I think that that battle cry has been going on for some time. It was part of the policy that passed the 5-cent increase in the Federal gas tax. It was also one that increased the gas tax in our home State, and I think that there is a little backlog in terms of that funding finally coming into play and being made available. As I say, in our State there has been a dramatic increase in highway activity and there is anticipation that that will increase as the Federal funds are released for additional projects.

Ms. **Hall**. I have something I would like to add on that.

Mr. **Reid**. It's about time. You haven't said a word.

Ms. **Hall**. OK. Well, now is my big chance.

You are absolutely right that the Federal-aid highways are falling apart. All one needs to do is go down to the Federal Highway Administration and look at the maintenance reports that the FHwA officials in each State send in to headquarters every year, and it documents instance after instance of just appalling maintenance problems.

To the extent that highways are getting more safe, that would primarily be true to a limited extent on noninterstate highways. The interstate highways have been built to higher standards than the noninterstates for quite some years, and those standards haven't significantly improved recently.

Mr. **Tomerlin**. May I comment, Mr. Reid?

Mr. **Reid**. Of course.

Mr. **Tomerlin**. As part of my duties, I travel across country about once a year and I drive through all parts of the country. The highway system is not falling apart and many thousands of miles of it are in excellent condition. It's quite true that there are some road areas—and it's primarily influenced by weather, as I'm sure you understand—where the road is in poorer condition. The constant factor that you will see is that on the roads in poorer condition, traffic is traveling slower.

Mr. **Reid**. The final question I have, Mr. Chairman, the thing that hasn't been made clear—and here we have a panel that I think has been very interesting—at 55 miles per hour, testimony has clearly established that people don't abide by the law. They go faster than that, a lot of the people do. What I am concerned about, let's say that we raise it to 60 or 65 or 70. Are they going to do the same thing?

Mr. **Baxter**. We'll both jump in on this one, but there have been many comparisons made between now and 1974 and then previous to 1973, before the imposition of the 55-mile-per-hour speed limit, and you have heard comments made on the 85th percentile. Well, on our interstate highways in 1973, prior to the imposition of 55, our interstates, the speed limits varied. Most of them were 70 miles per hour; some were 75; some were 65, but 70 miles per hour was a good, strong average for most of our interstate highways. The 85th percentile in our country at that time was about 73 miles per hour, which means people were—the vast majority, 75 percent of the people probably, were driving at or below the speed limit.

Today that 85th percentile, even using the somewhat jaundiced figures that we receive from the States in order for them to meet their compliance requirements indicate that we're exceeding that speed limit at the 85th percentile by 10 miles per hour, which means the public clearly is not in sympathy with the particular speed limit. But when we do get it up something closer to the design limit of the highway, a realistic design limit of the highway, the public will comply with it as they did then.

Mention was made of the vehicle creep, the half-mile increase every year in speeds. Much of that vehicle creep was because of the coming onboard or onstream of our limited access divided highway system. Those estimates of speeds are, of course, again averages, and as more and more of our limited access highway system came onstream, speeds around the country did in fact increase but it didn't mean people were driving necessarily faster on the same systems.

Mr. REID. Could I have a response from the two women?

Ms. CLAYBROOK. Well, I think that if you——

Mr. REID. Or one anyway.

Ms. CLAYBROOK. I'll comment. Maybe Kathy would like to, too. I was just going to say that if your speed is 70 miles per hour, most people are perhaps scared to death to go much above that and so I could understand why you would have your speed differential at that—above that be smaller than above 55, but that doesn't mean that the speed differential for all the cars on the highway isn't quite a bit larger than that. So you're right, there would be perhaps a little bit less exceeding of the speed limit because most people just don't want to even go 70 miles per hour.

Mr. REID. I'm not right. I didn't say anything. I'm just listening.

Ms. CLAYBROOK. Excuse me. Mr. Baxter.

Mr. REID. Thank you. I have no further questions.

Mr. GLICKMAN. Thank you.

Mr. Packard.

Mr. PACKARD. Thank you, Mr. Chairman.

Ms. Claybrook, how do you account for the fact that with a 55-mile-per-hour speed limit, the majority of the American drivers are now exceeding that, sometimes as much as—in fact, the 85 percentile right now it appears is about 10 miles per hour faster—when yet the polls show that the majority of the Americans would vote to retain the 55 miles per hour? Why? That seems to be a dichotomy. Why do people travel faster than they would vote to retain?

Ms. HALL. I think there has been some confusion here today about what "85th percentile" means. It's sort of a technical highway engineering term, and what it actually means is that 85 percent of the cars are driving at or lower than that speed, so you have——

Mr. PACKARD. I understand that.

Ms. HALL. Say if the 85 percentile is 62 or something, you can have a lot of cars going——

Mr. PACKARD. I think statistics do bear out, though, that the majority of the drivers are exceeding the 55-mile-per-hour speed limit. Why, when they are voting according to the polls to retain the 55?

Ms. CLAYBROOK. Well, I think that if you look at a highway that has a 40-mile-per-hour speed limit you would probably find about the same thing, and that is that cars are designed to go as high as 70 miles per hour. The highways are designed, some of them, not most of them but some of them are designed for that higher speed travel, and so you will find some drivers will routinely exceed it and a lot of drivers, most of the drivers will go within 5 miles per hour above the speed limit.

Mr. PACKARD. I disagree with you on your 40-mile-per-hour streets because those are set by averages under the 85th percentile rule, so on those I don't believe the people exceed your residential street speed limits to the extent that they do the 55.

Ms. CLAYBROOK. Well, yes, I didn't mean residential streets, but there are plenty of roads with 40 miles per hour that are not residential streets and you see people never go 40 miles per hour on them. Even on 30-mile-per-hour streets, people never or rarely go 30 miles per hour.

But I think that the reason why, which is the nub of your question, the differential between the public opinion polls and the speed that people actually go, is that the enforcement of that law and the general variance just when you're driving along at that speed, 5 miles per hour is not by most people considered exceeding the law. They are driving within the plus or minus 5 miles per hour, and the support for the law I think is based on the fact that people recognize its benefits, and also it is not really an imposition in terms of time lost for most people.

Mr. PACKARD. Let me get to the question I was particularly interested in. The speed variation I think is generally agreed to be more dangerous than the speed limit or the speeds, and I certainly agree with that. Do you have a feeling or is there any—and I will ask Ms. Claybrook first, and then maybe Mr. Baxter—do you have a feeling as to whether the speed variation would increase or decrease if the speed limit was moved from 55 to 65 on rural interstates? The speed variation, would it increase or decrease, on the average?

Ms. HALL. Well, based on all the data we have, we would expect it to increase.

Mr. PACKARD. On what basis?

Ms. HALL. Well, the study committee report discusses the drop in speed variance after the speed limit was moved down to 55 and, as Ms. Claybrook has discussed on a couple of occasions, there are a lot of people who simply don't want to drive that fast and so they are going to be driving lower than the speed limit anyway. On rural highways, a lot of those highways were designed for 50 miles per hour and 55, so——

Mr. PACKARD. I'm talking about rural interstates, rural interstates.

Ms. HALL. On rural interstates——

Mr. PACKARD. I'm not talking about rural farm roads. Rural interstates, divided highways, four-lane highways——

Ms. HALL. The speed variance is still going to increase because a lot of people prefer to drive at 55, and the data shows that when you dropped the speed limits on the rural interstates the speed variance did decrease quite significantly.

Ms. **Claybrook**. I just have one comment, and that is that I don't think that we would necessarily agree that the speed limit is not as important as speed variance.

Mr. **Packard**. I thought your testimony said that.

Ms. **Claybrook**. No, no. What I said was that speed variance would increase if you raised the speed limit, and therefore we were concerned about that as another reason not to do it.

Mr. **Packard**. I see.

Mr. Baxter.

Mr. **Baxter**. There have been some studies in the past that have indicated, when speed limits were increased on specific highways, that it actually did reduce the variance because certain persons who had been exceeding the speed limits by substantial margins dropped back to the new speed limit, the new higher speed limit. They would drop back in because they would fall back into the pattern. It was easier to stay in the pace than to continue exceeding the speed limit by the amount they did. Actually what you are suggesting, of course, is increasing the speed limit to the speed that people are primarily going right now.

Mr. **Packard**. That was the heart of the question.

Mr. **Baxter**. Yes.

Mr. **Packard**. If the 85-percentile formula works in the establishment of most speed limits, and most cities and States use that formula, then it is based upon the flow of traffic, and the flow of traffic has direct relationship to the speed variations. That is why the question, and I think there is some dispute on the answer to that question.

Ms. **Claybrook**. Could I just make one final comment, Mr. Packard, and that is that I think it is true, as some of our colleagues here on this panel have said, that the speed that people go also varies according to other circumstances, and so you're never going to find a "perfect speed," if you would, for any particular highway.

Mr. **Packard**. I understand that.

Mr. **Glickman**. I want to thank the panel for the testimony, and I appreciate the diversity of the testimony.

Ms. Claybrook, I think it's interesting to find that when you and the closest witness who agrees with you is the Reagan administration witness here, we know that the world has become rather an interesting place to live, you know. [Laughter.]

Well, that occasionally happens on other matters.

Mr. **Glickman**. Thank you very much.

Our final group of witnesses are our State panel, and we are sorry that you are last but it does not reflect on the quality of your testimony nor the feeling we have toward it. That's Al Stone, who is director of the Nevada Department of Transportation, and the Honorable Doug Todd, who is chairman of the transportation committee of the Arizona House of Representatives. We are appreciative of having you here.

Mr. Stone, why don't you begin, Representative Stone, and then we'll go with Mr. Todd afterward. Since you're basically a colleague of ours, we'll let you have the right to go first.

Mr. STONE. Thank you, Mr. Chairman, members of the committee, especially Mr. Reid.

Mr. GLICKMAN. Go ahead. I'm sorry. It's Mr. Todd who is the elected representative.

Mr. TODD. Yes, sir.

Mr. GLICKMAN. Why don't we let you go first, then, Mr. Todd? I got confused.

Mr. TODD. Thank you, Mr. Chairman.

Mr. GLICKMAN. Let me just make—I apologize for doing this. We need to vacate this room at 1:45, so I just thought I would tell you.

Mr. TODD. I'm off and running.

Mr. GLICKMAN. OK.

STATEMENT OF HON. DOUG TODD, CHAIRMAN, TRANSPORTATION SUBCOMMITTEE, ARIZONA HOUSE OF REPRESENTATIVES

Mr. TODD. Mr. Chairman and members of the committee, I am Doug Todd, chairman of the transportation committee of the Arizona House of Representatives. On behalf of the leadership of the Arizona Legislature, let me convey our appreciation for the opportunity to testify on whether the 55-mile-per-hour national speed limit should be continued on the interstate highway system or if, as the alternative, there should be the authority granted to adjust that limit on the profound differences between the rural and the urban interstates.

First, let me describe my background. I grew up in a rural area of Arizona and for many years made my living as a farmer. However, I now live in and have been elected for the last four times to represent the city of Tempe, a part of the urban Phoenix area.

The rural interstate system is typically high quality and sparsely travel. Currently, the drivers on that system across the United States are losing about a billion hours of their productive lives to a policy that is very properly designed for urban highways but often is very, very inappropriate for the rural ones. Because Arizona has so much sparse population area, we believe that the 55 limit impacts unfairly on our State and others, and particularly in the West. Many of those hours of unproductivity lost on rural roads ought to be given back to the drivers.

Let me tell you how the current policy affects Arizona drivers. A disproportionate share of the resources of State government, Federal agencies, life-saving medical specialties, higher education, banking and commerce are located in the Phoenix urban area. This means that my constituents—your constituents—all over the State must drive to Phoenix. On the other side, those drivers delivering goods and services, including Government agencies, must go out to the rest of the State from Phoenix.

A Navajo living on the reservation in northeastern Arizona must drive up to 350 miles to get those necessities, such as the Phoenix Indian Hospital. That drive is equivalent, Mr. Chairman, to a trip from Washington, DC, through Baltimore, Philadelphia, and New York City to Hartford, CT. However, the largest city on the 310 miles of interstate highway from Window Rock, the Navajo tribal capital, to Phoenix, the Arizona capital, is Flagstaff, AR with a population of about 35,000. On the drive from Washington to Hartford, there are more people in the first 10 miles than there are along the entire route in Arizona, so without facing a comparable risk the Arizona driver can go 10 miles per hour faster and save an hour of unproductive driving time. By the way, we have three members of the State legislature that make that drive two times a week at a minimum.

Arizona has 1,021 miles of rural interstate highways and only about 133 miles of urban. About 85 percent of the State's population lives in the Phoenix and Tucson areas, and their driving is concentrated on that 133 miles. It is 130.5 miles on Interstate 10 from the west side of the Phoenix urban area to the California border, and the largest of a handful of community along that route has a population of less than 1,000 souls. Between the two major urban areas, 101 miles of rural interstate, there is only one major community, and that is Casa Grande with about 15,000 people in it.

So the drivers in Arizona have reacted to the actual driving conditions. They do not comply with the 55-limit on rural interstates. Most drivers, rightly or wrongly, believe that they are within the spirit of the law at 60 to 65 miles per hour and should not be cited unless they exceed that speed. The result is that during fiscal year 1984, 56.3 percent of the traffic in Arizona exceeded that limit.

Under current Federal law, the State can lose up to 10 percent of its primary, secondary, and urban Federal highway funds if over 50 percent of the State's traffic exceeds that limit. Under this kind of setup Arizona can be penalized because our drivers are realistically dealing with sparsely populated rural interstates. This is not fair. We have received the notice that we are one of the three States that the hammer is about to fall on.

The major impact of the 55-mile-per-hour limit is safety, but statistics tell us that rural highway drivers spend four times as many hours per life saved as the urban drivers do. The issue of what is a safe speed for the rural driver is different than for the bumper-to-bumper urban rush hour traffic. The only truly safe highway may be an empty one, and any choice of speed limits is a balance between safety and the necessity to travel at reasonable speeds. Arizona believes that the choice should leave room for adjustment to local conditions and that the State should make that adjustment.

The cost in time lost must be calculated in dollars also. Each hour lost costs independent truckers about $65. That could tally up to $15,000 annually, and that's your constituents and my constituents who pay that cost.

The unfairness of the 55 limit to the Arizona rural drivers was obvious in 1974 when the legislature first passed that law. The law was very unpopular, and passage was only possible because of the threat of Federal sanctions, and then only with a provision that we look at it every other legislative session. Several years ago the continuing hostility of the public led us to lower the penalty for speeding in the 56-to-65-mile-per-hour range from a $100 maximum to $15 with no points on the license. The resentment of the coercive use of Federal highway funds to enforce State compliance without any discretion remains very high in the State legislature.

Let me emphasize, Arizonans are not asking for repeal of the 55 limit. A majority of our public, over 85 percent of whom are urban drivers, support the limit as a general concept. What Arizona wants is for the State to have the discretion to adjust our laws to accommodate differences in local conditions on rural interstates without having to face coercive Federal sanctions. States should and can govern interstate highways to make them both safe and efficient, Mr. Chairman.

I have a letter from the leadership of the House. We are out of time. They generally agree. Thank you also for the opportunity for us to be here and be a part of this today, Mr. Chairman.

[The prepared statement of Mr. Todd, plus the letter mentioned above follows:]

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE, I AM DOUG TODD, CHAIRMAN OF THE TRANSPORTATION COMMITTEE OF THE ARIZONA HOUSE OF REPRESENTATIVES. ON BEHALF OF THE LEADERSHIP OF THE ARIZONA LEGISLATURE LET ME CONVEY OUR APPRECIATION FOR THE OPPORTUNITY TO TESTIFY ON WHETHER THE 55 MILES-PER-HOUR NATIONAL SPEED LIMIT SHOULD BE CONTINUED ON THE INTERSTATE HIGHWAY SYSTEM OR IF IN THE ALTERNATIVE THERE SHOULD BE AUTHORITY GRANTED TO ADJUST THAT LIMIT BASED ON THE PROFOUND DIFFERENCES BETWEEN RURAL AND URBAN INTERSTATE HIGHWAYS.

FIRST, LET ME DESCRIBE BY BACKGROUND. I GREW UP IN A RURAL AREA OF ARIZONA AND FOR MANY YEARS MADE MY LIVING AS A FARMER. HOWEVER, I NOW LIVE IN -- AND HAVE BEEN ELECTED FOUR TIMES TO REPRESENT TEMPE, WHICH IS PART OF THE PHOENIX URBAN AREA. I HOPE TO BE ABLE TO ADD A COMBINED URBAN-RURAL PERSPECTIVE TO THIS ISSUE.

THE RURAL INTERSTATE SYSTEM IS TYPICALLY HIGH QUALITY WITH SPARSE TRAVEL. CURRENTLY, DRIVERS ON THAT SYSTEM ACROSS THE U. S. ARE LOSING ABOUT A BILLION HOURS OF THEIR PRODUCTIVE LIVES TO A POLICY WHICH IS PROPERLY DESIGNED FOR URBAN HIGHWAYS, BUT OFTEN IS INAPPROPRIATE FOR RURAL ONES. BECAUSE ARIZONA HAS SO MUCH SPARSELY POPULATED RURAL AREA, WE BELIEVE THAT THE 55 LIMIT IMPACTS UNFAIRLY ON OUR STATE AND OTHERS, PARTICULARLY IN THE WEST. MANY OF THOSE HOURS UNPRODUCTIVELY LOST ON RURAL ROADS OUGHT TO BE GIVEN BACK TO DRIVERS TO SPEND WITH THEIR FAMILIES OR TO DO THINGS THAT ADD QUALITY TO THEIR LIVES.

LET ME DESCRIBE HOW THE CURRENT POLICY AFFECTS ARIZONA DRIVERS. A DISPROPORTIONATE SHARE OF THE RESOURSES OF STATE GOVERNMENT, FEDERAL AGENCIES, LIFE-SAVING MEDICAL SPECIALTIES, HIGHER EDUCATION, BANKING AND COMMERCE ARE LOCATED IN THE PHOENIX URBAN AREA. THAT MEANS THAT DRIVERS FROM ALL OVER THE STATE MUST DRIVE TO PHOENIX AND DRIVERS FROM PHOENIX MUST GO LONG DISTANCES TO DELIVER GOODS AND SERVICES.

A NAVAJO LIVING ON THE RESERVATION IN NORTHEASTERN ARIZONA MUST DRIVE UP TO 350 MILES TO GET THOSE NECESSITIES, SUCH AS THE USE OF THE PHOENIX INDIAN HOSPITAL. THAT DRIVE IS EQUIVILENT TO A TRIP FROM WASHINGTON, D.C. THROUGH BALTIMORE, PHILDELPHIA, NEW YORK CITY TO HARTFORD, CONN. HOWEVER, THE LARGEST CITY ON THE 310 MILES OF INTERSTATE HIGHWAY FROM WINDOW ROCK, THE NAVAJO TRIBAL

CAPITAL, TO PHOENIX, IS FLAGSTAFF WITH A POPULATION OF 35,000. ON THE DRIVE FROM WASHINGTON TO HARTFORD, THERE ARE MORE PEOPLE IN THE FIRST TEN MILES THAN THERE ARE ALONG THE ENTIRE ROUTE IN ARIZONA. WITHOUT FACING A COMPARABLE RISK, THE ARIZONA DRIVER CAN GO 10 MILES-PER-HOUR FASTER AND SAVE AN HOUR OF UNPRODUCTIVE DRIVING TIME.

ARIZONA HAS 1,021 MILES OF RURAL INTERSTATE HIGHWAYS, BUT ONLY 133 MILES OF URBAN INTERSTATES. ABOUT 85% OF THE STATE'S POPULATION LIVES IN THE PHOENIX AND TUCSON AREAS. THEIR DRIVING IS CONCENTRATED ON THAT 133 MILES. HOWEVER, IT IS 130.8 MILES ON INTERSTATE 10 FROM THE WESTSIDE OF THE PHOENIX URBAN AREA TO THE CALIFORNIA BORDER. THE LARGEST OF THE HANDFUL OF COMMUNITIES ALONG THAT ROUTE HAS A POPULATION OF LESS THAN ONE THOUSAND. BETWEEN THE TWO URBAN AREAS OF PHOENIX AND TUCSON IS 107.3 MILES OF RURAL INTERSTATE. THE LARGEST COMMUNITY ON THAT ROUTE IS CASA GRANDE WITH 15,000 PEOPLE.

SO, DRIVERS IN ARIZONA HAVE REACTED TO ACTUAL DRIVING CONDITIONS. THEY DO NOT COMPLY WITH THE 55 LIMIT ON RURAL INTERSTATES. MOST DRIVERS BELIEVE THAT THEY ARE WITHIN THE SPIRIT OF THE LAW AT 60 TO 65 MILES-PER-HOUR AND SHOULD NOT BE CITED UNLESS THEY EXCEED THAT SPEED. THE RESULT IS THAT DURING FISCAL YEAR 1984, 56.3% OF THE TRAFFIC IN ARIZONA EXCEEDED THE LIMIT. UNDER CURRENT FEDERAL LAW, THE STATE CAN LOSE UP TO 10% OF IT'S PRIMARY, SECONDARY AND URBAN FEDERAL HIGHWAY FUNDS IF OVER 50% OF THE STATE'S TRAFFIC EXCEEDS THE 55 LIMIT.

ARIZONA COULD BE PENALIZED BECAUSE ITS DRIVERS ARE REALISTICALLY DEALING WITH SPARSELY POPULATED RURAL INTERSTATES. THAT IS NOT FAIR.

THE GREATEST IMPACT OF THE 55 MILES-PER-HOUR LIMIT IS SAFETY, BUT DRIVERS ON RURAL HIGHWAYS SPEND FOUR TIMES AS MANY HOURS DRIVING PER LIFE SAVED AS URBAN DRIVERS DO. THE ISSUE OF WHAT IS A SAFE SPEED FOR THE RURAL DRIVER IS DIFFERENT THAN FOR THE BUMPER-TO-BUMPER URBAN RUSH HOUR TRAFFIC.

THE ONLY TRULY SAFE HIGHWAY IS AN EMPTY ONE. ANY CHOICE OF SPEED LIMITS IS A BALANCE BETWEEN SAFETY AND THE NECESSITY TO TRAVEL AT REASONABLE SPEEDS. ARIZONA BELIEVES THAT THE CHOICE SHOULD LEAVE ROOM FOR ADJUSTMENT TO LOCAL CONDITIONS.

THE COST IN TIME LOST MUST BE CALCULATED IN DOLLARS, TOO. EACH HOUR LOST COSTS INDEPENDENT TRUCKERS ABOUT $65. THAT CAN BE $15,000 ANNUALLY LOST TO EACH TRUCKER. CONSUMERS AND OUR ECONOMY PAY DEARLY FOR THAT UNPRODUCTIVE TIME.

THE UNFAIRNESS OF THE 55 LIMIT TO ARIZONA'S RURAL DRIVERS WAS OBVIOUS IN 1974 WHEN THE LEGISLATURE FIRST PASSED THE LAW. THE LAW WAS VERY UNPOPULAR. PASSAGE WAS POSSIBLE ONLY BECAUSE OF THE THREAT OF FEDERAL SANCTIONS AND THEN ONLY WITH A PROVISION WHICH REQUIRED REVIEW BY EACH LEGISLATURE. SEVERAL YEARS AGO, THE CONTINUING HOSTILITY OF THE PUBLIC LED THE LEGISLATURE TO LOWER THE PENALTY FOR SPEEDING IN THE 56 TO 65 MILES-PER-HOUR RANGE FROM A MAXIMUM $100 FINE TO $15 WITH NO POINTS AGAINST THE DRIVER'S LICENSE. THE RESENTMENT OF THE COERSIVE USE OF FEDERAL HIGHWAY FUNDS TO ENFORCE STATE COMPLIANCE WITHOUT DISCRETION REMAINS VERY HIGH.

LET ME EMPHASIZE, ARIZONANS ARE NOT ASKING FOR REPEAL OF THE 55 LIMIT. A MAJORITY OF OUR PUBLIC, 58%, OVER 85% OF WHOM ARE URBAN DRIVERS, SUPPORT THE LIMIT AS A GENERAL CONCEPT. WHAT ARIZONA WANTS IS FOR THE STATE TO HAVE DISCRETION TO ADJUST OUR LAWS TO ACCOMODATE DIFFERENCES IN LOCAL CONDITIONS ON RURAL INTERSTATES WITHOUT HAVING TO FACE COERSIVE FEDERAL SANCTIONS. STATES CAN AND SHOULD GOVERN INTERSTATE HIGHWAYS TO MAKE THEM BOTH SAFE AND EFFICIENT.

Arizona State Legislature
Phoenix, Arizona

February 11, 1985

Mr. Dan Glickman, Chairman
Subcommittee on Transportation, Aviation and Materials
Committee on Science and Technology
U.S. House of Representatives
Washington, D.C. 20515

Dear Mr. Glickman:

The leadership of the Arizona Legislature recognizes the purpose of the national 55 miles-per-hour mandate, and that this mandate is needed in most areas of the United States. However, in the past the federal government has refused to recognize the regional differences, as well as, the differences between rural and urban Interstate systems.

The rural Interstate systems are typically high-quality roadways with less traffic than urban Interstate systems. The rural Interstate system also has one of the best safety records. In addition, the increase cost in travel time due to the imposition of the 55 miles-per-hour mandate is estimated at one billion hours per year. This averages approximately seven hours more per driver.

Although national opinion polls indicate that the public supports this law, there are regional differences. Western and southern states have a higher percentage of their populations who oppose this mandate. It is the western states that have the "weakened" penalties for violations of the 55 speed limit. However, the Transportation Research Board's report shows that the amount of the violation has no correlation to driver behavior. It also shows that states with "weaker" penalties cite violations twice as often as states with higher penalties. Finally, this report also finds fault with the federal compliance monitoring system to the point of rendering it invalid and recommending that it should be replaced.

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In light of these findings, we in Arizona feel that the federal government should reevaluate its policy of imposing the 55 miles-per-hour mandate on all interstate systems. The threat of sanctions should not be imposed against states that the federal government deems are in violation of this mandate.

Thank you for this opportunity to present our views. We fully support Representative Doug Todd's statements presented to the subcommittee.

Sincerely,

Stan Turley
Stan Turley
President
Senate

James J Sossaman
James J. Sossaman
Speaker
House of Representatives

Robert B Usdane
Robert B. Usdane
Majority Leader
Senate

Burton S. Barr
Majority Leader
House of Representatives

Anne Lindeman
Anne Lindeman
Majority Whip
Senate

Joseph J. Lane
Joseph J. Lane
Majority Whip
House of Representatives

Mr. GLICKMAN. We thank you, Representative Todd, for your statement. The letter from the speaker of the house and the president of the senate and the other elected leaders of your legislature will be made a part of the record, and that will be a useful component of our record as we deal with this.

Mr. TODD. I would appreciate that, Mr. Chairman, very much.

Mr. GLICKMAN. Mr. Stone, it is a pleasure to have you here today. Why don't you go ahead and proceed.

Mr. STONE. Mr. Chairman, all the——

Mr. GLICKMAN. We are delighted to have your member from Nevada here, who is one of the most important members of the committee.

Mr. STONE. Thank you. I'm delighted to be here.

Mr. REID. I've got to be real careful with Mr. Stone because my brother works for him.

Mr. GLICKMAN. Oh, I thought it was because he watches how fast you drive when you're back in Nevada.

Mr. STONE. We do that also.

STATEMENT OF MR. A.E. STONE, DIRECTOR, NEVADA DEPARTMENT OF TRANSPORTATION

Mr. STONE. I would like to clarify that all statistics that I give in my report are Nevada statistics, not national.

Accident studies in Nevada, that is in 1975, 27 percent of the accidents that occurred, occurred on rural highways. Today that figure is down to 17.7. The safest of these, of course, is the rural interstate. Since 1973, the accident rate on this system has decreased from 1.38 total accidents and from 0.05 accidents per million vehicle miles to 1.11 total accidents and 0.04 accidents per million vehicle miles. This is a 20 percent decrease in both. When comparing it to other rural systems in our State, the interstate accident rate is 40 percent lower than the primary roads—that's the U.S. routes—and 66 percent lower than those incurred on secondary roads within the State.

This 20 percent reduction in accidents and fatalities on rural interstate from 1973 until the present has been caused by several factors, in our opinion. These are the increased amount of safety work that we have done on the interstate in new projects, as well as the spot safety program. I would like to point out, one of the reasons that the interstate is so much safer than the other routes is that when we use Federal funds on resurfacing on the interstate, it costs us at least 50 percent more than a resurfacing project where all State funds are involved because we are required to get full safety standards with those funds. In Nevada, our program is a little over 50 percent Federal funds.

In addition to vehicle safety characteristics which are responsible for some of this reduction, driver awareness, the programs that we have in school, Nevada also has one of the toughest DUI or alcohol penalties within the Nation. All of these factors comprise a direct relationship in reducing traffic accidents or their severity.

One of our big problems in the State is that in order not to be penalized—and we have been very close to being sanctioned several times, and even this year we are only in compliance by eight-tenths of 1 percent—is that we are not allowed because of this and to keep from losing funds, we spend so much of the overtime of our highway patrol on the rural interstate because even though this is 10 percent of our total mileage in the State, it is carrying something like 30 percent of all traffic. So in order to comply with the 55 we have to spend much of our resources in enforcement on the rural interstate where actually it is my opinion and the highway patrol's, we could actually save more lives if we could put that where the accidents and the real problem areas are.

Nevada recommends that the States have the option on selected roads, especially rural interstate, to impose. In Nevada we are required by State law when we change a speed limit to actually make an engineering study, to make a speed study. After these studies have been made, we come before our transportation board for a recommendation of change, and only after this type of professional approach to changing speed.

If speeds are adjusted to safe driving conditions of the roadway it should increase compliance, in our opinion of the driving public. The speed that we are traveling today on rural interstate comes very close to the speed, the average speed that was on rural interstate in 1973 in Nevada. Compliance to the 55-mile-per-hour speed limit with the possible loss of Federal funds certainly doesn't allow us the ability to best use the enforcement where needed. Currently 82 percent of monitored vehicles are exceeding the 55 miles per hour in Nevada, with an average speed of 58. Now this is, of course, before the adjustment factors are applied. Only 13 percent of all monitored vehicles are exceeding 65 miles per hour in the State today.

We believe that the 55-mile-per-hour speed limit should be retained on all urban and selected rural routes where problems with congestion, uncontrolled access, geometrics, and accidents actually exist. The motorists' safety is a prime concern of ours in Nevada. It is our recommendation, therefore, based upon various aspects of speed, accident rates, travel time, fuel consumption, perceived necessity for change, public attitude, that there certainly exists a need to modify the 55 miles per hour national speed limit. We feel that on a local level we know more about Nevada roads than someone in Washington, and we feel that we can set the speed much better.

[The prepared statement of Mr. Stone follows:]

NEVADA DEPARTMENT OF TRANSPORTATION

COMMENTS ON THE NATIONAL RESEARCH COUNCIL REPORT

55 a Decade of Experience

By

A. E. Stone, Director

February 20, 1985

Comments on the National Research Council Report

55 a Decade of Experience

The following summary of comments are offered by the State of Nevada. Comments will address the conclusions of the study in relationship to the State of Nevada.

Accident Review

Accident studies indicate that in 1975, 27.1% of all accidents occurred on the rural highways of Nevada. Today, that figure has decreased, and only 17.7% of all accidents occur on rural highways. The safest of these highways is the Rural Interstate System. Since 1973, the accident rate on this system has decreased from 1.38 total accs. and 0.05 fatal accs. per million vehicle miles to 1.11 total accs. and 0.04 fatal accs. per million vehicle miles, a 20% decrease in both. When comparing it to other rural systems, the interstate rural acc. rate is 40% lower than that of Primary Rural Roads, and 66% lower than those rates incurred on Secondary Roads.

The 20% rate reduction in accidents and fatalities on Rural Interstate from 1973 to present may have been caused by several factors. Such as, the increased amount of safety work that has been incorporated on all new construction as well as on all safety projects, improved vehicle safety characteristics, driver awareness to the problems involved with alcohol use (We have one of the strongest DUI laws in the country) when driving and the implementation of the National 55 MPH speed limit. All these factors comprise a direct relationship in reducing traffic accidents and/or their severity.

Enforcement

The State of Nevada thru the cooperative efforts of the Department of Transportation and the Nevada Highway Patrol has enforced the 55 MPH speed limit as mandated by the Federal Government. All roads have been posted with 55 MPH speed limits. The highway patrol has purchased an aircraft to enforce and monitor the 55 MPH limit, as well as the Department of Transportation monitoring the speeds of the traveling public with its own equipment. It has been found while there has been a consistent downward accident reduction that speed trends are increasing, and from 1977 to 1984 there has been a 6.9% increase in the number of citations issued for violation of the 55 MPH speed.

The State of Nevada will continue enforcement of the speed limits at the level that is agreed upon by Congress.

Raising The Posted Speed Limit

Nevada recommends that the states have the option to post limits on selected roads, above the 55 MPH speed limit. This alternative would not apply across the board to all highways but be established on those highway segments as determined through sound traffic engineering principals which would include justification by speed studies, and accident studies to determine the safe speed that a vehicle could travel the roadway.

If the speeds are adjusted to the safe driving condition of the roadway it should increase compliance by the traveling public, if they feel that the speed limits have been reasonably established. This then would permit enforcement to monitor the roadways that have accidents and speed problems.

Compliance to the 55 MPH speed limit with the possible loss of Federal funds may not allow the States the ability to best use their enforcement where needed.

Currently, 82% of monitored vehicles are exceeding the 55 MPH speed limit. The average speed of all monitored vehicles is 58 MPH. Only thirteen percent (13%) of all monitored vehicles were exceeding 65 MPH.

Summary

Nevada believes that the 55 MPH speed limit should be retained on all urban and selected rural routes, where problems with congestion, uncontrolled access, geometrics and accidents exist. The motorist safety is a prime concern. It is our recommendation; therefore, based upon the various aspects of the speeds, accident rates, travel time, fuel consumption, perceived necessity of change, public needs and attitudes, there exists a need to modify the 55 MPH National Maximum Speed Limit.

Mr. GLICKMAN. Thank you, Mr. Stone. I want to thank both of you for your testimony, and I would like to ask you, Mr. Stone—you are director of your State Department of Transportation—how do you think your colleagues around the country would feel, the other State directors, about this issue? Do you have any—have you talked to them about this at all?

Mr. STONE. Oh, absolutely, and I would certainly feel that we would almost unanimously in the West, if not the majority in most of the country. Even States like Massachusetts have been threatened with sanction from the 55 miles per hour, and of course the biggest problem in administrators of transportation, one of the biggest problems of course is safety. This is a big concern to us, but we can't improve the highways if we are losing funds.

Mr. GLICKMAN. Thank you.

Mr. Reid.

Mr. REID. Thank you.

When did Nevada lift its—you know, when I was growing up and for some time thereafter we didn't have a speed limit.

Mr. STONE. This was in 1973-74.

Mr. REID. Right then we didn't have one?

Mr. STONE. That's correct. We had a speed limit where it was——

Mr. REID. Oh, I understand. I remember, but out in the wide-open spaces we didn't.

Mr. STONE. That's correct

Mr. REID. I can remember one of Representative Todd's colleagues from Nevada, a group of them in fact drove back from Reno—Carson City, actually—to Las Vegas every weekend. That was a drive of about 900 miles round-trip, and they didn't go 55.

Mr. TODD. That's right.

Mr. REID. Let's think about this a little bit, though. In Las Vegas itself, from Las Vegas to Los Angeles do you think the 55-mile-per-hour speed limit should be changed?

Mr. STONE. Well, again, we would certainly make a study.

Mr. REID. Give me your opinion.

Mr. STONE. I think there are many stretches of rural interstate in Nevada. We have about 550 miles——

Mr. REID. I know, but let's talk about Las Vegas to the California border. Do you think with the traffic we have that should be changed?

Mr. STONE. I just really couldn't say on that section particularly because of the amount of traffic that it carries. We would have to conduct a speed study as well as——

Mr. REID. My impression is that that probably wouldn't be changed. I don't know, but——

Mr. STONE. I doubt very seriously that it would, but in the other direction to——

Mr. REID. It probably could be.

Mr. STONE. It could be changed, yes.

Mr. REID. OK. Do you agree with the—would you be satisfied if there came a law out of this Congress saying that in certain selected rural areas the speed limit could be raised to 60 or 65 miles-per-hour?

Mr. STONE. Yes, I feel that it could be raised that high.

Mr. Reid. How high do you think it should be raised?

Mr. Stone. I would agree. I would certainly like to do it in steps. I wouldn't want to go over 65. I wouldn't recommend going over 65 at this point in time.

Mr. Reid. Mr. Chairman, I know you're in a hurry, so I have no more questions.

I'm really glad you're here, Al. Thanks.

Mr. Glickman. Mr. Packard.

Mr. Packard. Mr. Chairman, I'll try to be brief, also.

I drove your Nevada highways a great deal when there was no speed limit and have done so since. Have you seen any great difference, or have studies been made as to the fatality rate since 1973 on your Nevada highways?

Mr. Stone. Yes, we have, and we are lowering the fatality rate by about 20 percent since then, but I don't believe that we can attribute that to speed.

Mr. Packard. Any portion of it to speed?

Mr. Stone. Well, I'm certain some portion may be attributed to speed but I would say the major portion is not.

Mr. Packard. Last question: Both States that you are representing, both Representative Todd and you, Mr. Stone, are being threatened with the withholding of Federal funds.

Mr. Stone. I would like to clarify. Nevada is not.

Mr. Packard. Not yet, huh?

Mr. Todd. Mr. Chairman, Mr. Packard, we have received the letter and we are one of three States that are now threatened with the sanction.

Mr. Packard. Do you believe that the monitoring system is partly to blame for that, or do you believe that there is a unique problem in Arizona?

Mr. Todd. Mr. Chairman, Mr. Packard, I believe that the monitoring system is at a great fault in there because of the monkey business we get to play with the numbers. It's a number-crunching game to see who can maneuver the numbers enough to qualify. We've been out of compliance for a long time and we have crunched the numbers as best we can. Nevada is only eight-tenths out and we are just three-tenths over, yet we are going to have the hammer on us and they are not, so——

Mr. Reid. Don't be spreading that word, would you?

Mr. Todd. Oh, Mr. Chairman, Mr. Reid, I won't.

Mr. Packard. It would appear to me that the monitoring devices, if they were placed on the interstate on the outskirts or even within the city limits of Las Vegas, would be entirely different than if it was placed on the downhill slope of the hill coming down about 40 miles out of Las Vegas on a rural interstate there. Is that true?

Mr. Stone. This is very true. In fact, of the 33 monitoring stations that we have in Nevada, which are randomly selected, you could move one of them and change the whole percent of compliance by 2 or 3 percent.

Mr. Packard. See, I can take it out of gear going down that same grade and I'll get up to 80 miles per hour without any motor, and some people—if you put the monitoring device there, obviously you would get a slanted view. If you put the monitoring device on one of our interstates in downtown Los Angeles you would get an entirely different picture than you would between Barstow and the Nevada border.

Mr. STONE. One of the problems that hurts a "bridge" State like Nevada is that we do not have heavy traffic, and we don't have the commuter rush peaks in the morning and afternoon, and this is a 24-hour account. On the interstate in downtown Oakland where you do have stop-and-go traffic, that is averaged in with the speed. We don't have stop-and-go traffic in Nevada, so we are penalized for not having that.

Mr. PACKARD. Let me ask Representative Todd for a very quick answer. Would you like the States to determine totally what the speed limit should be within their State, or do you believe that there ought to be a national speed limit, maximum speed limit?

Mr. TODD. Well, Mr. Chairman, Mr. Packard, I believe that that is a State responsibility and I do not believe it is a Federal responsibility. I think the States can and should be responsible for the speed and the safety on their own highways.

Mr. PACKARD. Thank you.

Mr. TODD. Incidentally, the cost of that monitoring program is quite prohibitive in some States as we try to crunch those numbers.

Mr. GLICKMAN. Thank you. We thank both the witnesses for their excellent testimony. This completes the hearing today, and I would like to say two things for the purpose of the record.

One is that there are some other folks who have indicated an interest in offering their statements for the record, and so the record will be open for 10 days. If anybody wants to get statements into the record, without objection the record will be open for 10 days.

Mr. PACKARD. Mr. Chairman, may I just introduce for the record's sake one comment that I was very interested in, and that is that with 10 percent of the fatalities on the rural interstate highways, if States could transfer the additional cost of enforcing that 10-percent portion of their highway system to more—shall I use the word more fatal?—areas of their highway system, they would probably save more lives than they would lose in terms of changing that speed limit. I think that's a significant comment that I had overlooked until this last witness, this last set of witnesses.

Mr. GLICKMAN. I would say that at this stage the committee will discuss what, if anything, we want to do with this issue. The actual substantive legislation that would change Federal speed limits is not within the jurisdiction of this committee. It is within the jurisdiction of the committee that the gentleman from California, Mr. Packard, serves on, and I think that what we would have to do is talk with people in that committee as well as make some internal judgments among ourselves as to whether this is something that we want to pursue legislatively right now, or we just want to continue to build an interest in the issue to see that we make some changes in the way the monitoring process works so that States are treated more fairly, and perhaps build some—see if there is grassroots pressure in America to change the current statute.

But I think that we have received a lot of hearing record information, a lot of testimony here which will be extraordinarily useful, and the first time Congress has really delved into this subject since 1975 and 1976, and I think the information we gather here ought to be shared with the Public Works Committee which has, generally, jurisdiction over the highway system of this country.

Mr. REID. Mr. Chairman, I would hope also that you would give some consideration to continuing, at least for a few hours, maybe half a day, this hearing to the effect that we—for example, I have talked to you privately—we may want to get someone from the insurance industry, and I am sure we can come up with some other witnesses that may make the record more complete for the Public Works Committee.

Mr. GLICKMAN. That's a good idea.

The hearing is adjourned. Thank you all.

[Whereupon, at 1:38 p.m., the committee recessed, to reconvene at the call of the Chair.]

APPENDIX

①

AMA POSITION

AMERICAN MOTORCYCLIST ASSOCIATION

TOPIC: Testimony before the House Committee on Science & Technology, Subcommittee on Transporation, Aviation and Materials - - February 20, 1985.

The American Motorcyclist Association is a 61-year-old national organization of 137,000 enthusiasts who use motorcycles for daily transportation and recreation. AMA members have expressed a very strong interest in the issue of a national speed limit, and question whether federal government should be the sole arbiter of maximum speed law.

The AMA's Government Relations Department has conducted biennial membership surveys on legislative issues over the past 6 years and consistently found opposition to the national maximum speed limit, with opposition ranging from 82 percent in 1978 to 85 percent in 1983. In 1984, the Association's monthly magazine published a series of articles on the national 55-mph speed limit and was overwhelmed by the response from members who expressed a lingering and increasingly vocal dissatisfaction with speed limits set in Washington and not in the states.

The Transportation Research Board's (TRB's) study, "55: A Decade of Experience" indicated that the 19-member committee was divided on recommending to Congress whether or not to allow leeway in changing speeds on rural Interstate highways. The committee considered arguments on increasing speed limits on these roadways, noting that while

Department of Government Relations, American Motorcyclist Association, P.O. Box 141, Westerville, Ohio 43081, Telephone: 614/ 891-2425

these roads account for 19 percent of all vehicle mileage, they only constitute 6 percent of the nation's roads. More compelling, they have only 4 percent of the nation's highway fatalities on 55-mph-posted roads. In contrast, the committee pointed out that rural two-lane highways - - 30 percent of the nation's 55-mph roads - - have 38 percent of the fatalities. Because of the low time-efficiency of travel at 55 on rural Interstates, the TRB committee gave Congress the very real option of either raising the rural Interstate speed limit itself, or allowing state legislatures to do so.

While AMA would prefer that Congress return all speed-limit authority to the states, we would also support any legislative measures that would allow improved time-efficiency on segments of the Interstate system. As representatives of many thousands of motorcyclists who use these roadways, it is germane to address the issue of motorcyclist safety should such a legislative bill be enacted.

There are over 5.5 million registered road motorcycles in the United States. Motorcyclist fatalities are in a three-year decline, dropping 14 percent while registrations have dropped 3.5 percent; accidents have remained relatively stable at about 175,000.

The issue of rider safety at higher speeds was not mentioned in the Transportation Research Board's report, but it should be noted that motorcyclists are far safer on Interstate highways than on rural roads. A study conducted by the University of Southern California (USC) under contract to the United States Department of Transportation found that freeways, including off-and-on ramps, accounted for only 10 percent of all motorcycle accidents. The AMA believes that if freeways and Interstates were made more efficient in terms of travel time - - resulting from an increased speed limit - - riders would be attracted to these roadways and the net change would be fewer accidents as fewer motorcyclists used the relatively more hazardous arterial and rural roads.

The subcommittee should not be concerned that motorcyclist fatalities or accidents would increase on rural Interstates if states were permitted some speed-limit leeway. In fact, some states have recently experienced significant declines in motorcyclist deaths, namely Nebraska, Oklahoma, South Dakota and Texas. These are also states with many miles of rural Interstates and states where the TRB study showed the costs of 55 are greater than the benefits. We would reiterate our prediction that a net motorcyclist safety improvement would follow a change in speed law.

We are sure that this Subcommittee would feel uncomfortable determining what is best for motorcyclist safety, that the Subcommittee would sooner relegate this activity to motorcycle safety experts familiar with the details, the issues and the players. In the same way, we feel that state legislative bodies ought to again be empowered to make the same kind of decisions about speed limits, each considering the arguments on fuel savings, time costs and safety. With this in mind, AMA in May of 1984 developed the following position to which we would now like to direct the Subcommittee's attention:

> * It is the position of the American Motorcyclist Association that the role of establishing speed laws has traditionally been that of state governments.
>
> * The only legitimate role of the federal government is to assist the states in developing realistic speed limits appropriate for the highways and driving population to which state laws are applied.
>
> * A single maximum speed limit is not appropriate for a transportation environment as diverse as that of the United States.

> * The AMA also believes that individual state legislatures, agencies and law-enforcement organizations are best suited to decide and enforce speed laws for the citizens of their states.

To conclude, we would reiterate that the AMA hopes this panel will recommend returning the authority of speed laws to states. But failing that, we hope you would recommend optional limits on rural Interstates, as suggested in the TRB 55 study. We feel that once Congress has returned this power to the states, and if state legislatures choose to select higher, more efficient limits, there is little to fear for motorcyclist safety on our nation's highways.

The AMA thanks the Subcommittee for its attention to our concerns and will entertain questions at this time.

Highway
Users Federation
FOR SAFETY AND MOBILITY

OFFICE OF THE PRESIDENT

February 25, 1985

The Honorable Dan Glickman
Chairman
Transportation, Aviation and Materials
  Subcommittee
House Science and Technology Committee
U. S. House of Representatives
Washington DC 20515

Dear Chairman Glickman:

The Highway Users Federation appreciates this opportunity to present its view on the National Maximum Speed Limit, the subject of your hearing on February 21, 1985.

The Federation is a non-profit coalition of over 400 companies and business associations. Our membership cuts across 27 industrial and commercial categories united in their common interest and concern for safe and efficient highway transportation.

The Federation strongly supports compliance with the national 55 mph speed limit, and the enforcement necessary to achieve that compliance.

When Congress enacted the speed limit in 1974, its stated purpose was to conserve fuel following the Arab oil embargo. In the study of the National Maximum Speed Limit by the National Research Council, it is reported that an estimated 167,000 barrels of petroleum are saved each day because of reduced speeds. This amounts to about a $2 billion annual savings.

However, the safety payoff from the National Maximum Speed Limit, has been even more dramatic. The National Research Council reports that, adjusting for the reduction in the fatality rate during the last decade as well as the increase in travel and average speeds during that period, about 2-4 thousand lives were saved in 1983 as a result of the 55 mph speed limit. In addition, 36-65 thousand fewer injuries occurred in 1983 because of the slower speeds and the more uniform pace of travel brought about by the 55 mph speed limit.

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This remarkable safety payoff has persisted over the past decade despite the trend to slightly higher average speeds, and the National Maximum Speed Limit continues to be one of the most effective measures in the history of highway traffic safety. For these reasons, we continued to support the National Maximum Speed Limit and its full enforcement in every state.

We are concerned that failure of states to meet requirements of the speed limit will jeopardize a portion of their Federal-aid funds. This is a serious threat in time of growing highway needs, and reductions in the Federal-aid program by reason of delay in passage of the Interstate Cost Estimate by Congress, and other federal deficit considerations.

We believe that states have the responsibility to fully enforce the speed limit for reasons of safety and energy conservation. Furthermore, we are concerned that enforcement focus on segments of the state's highway system where reduced speed will produce the greatest safety payoff. The National Research Council study has provided important insights into the strengths and weaknesses of the current compliance requirements and methods for assessing that compliance by the several states. This information should be considered in any Congressional deliberations relative to the national speed limit.

We would urge the Congress to continue its support for the national speed limit in the interest of public safety.

Sincerely yours,

John A. Clements

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February 7, 1985

Hon. Dan Glickman
Chairman, Subcommittee on Transportation,
Aviation and Materials
2321 Rayburn HOB
Washington, D.C. 20515

Dear Mr. Chairman:

First, I would like to congratulate you on your reelection as Chairman of the Subcommittee on Transportation, Aviation and Materials. I know you will continue to carry out the legislative responsibilities entrusted to you effectively and expeditiously.

After the announcement that your subcommittee would be holding hearings on the National Maximum Speed Limit, I sent copies of the National Research Council study 55: A Decade of Experience to officials in the Missouri Department of Highways and the Missouri Highway Patrol. I asked them to comment on the report and to add any additional recommendations they might have on the definition of "rural interstate."

Please find enclosed the responses I received. I hope that they will assist you, your subcommittee and your staff in preparing for the hearings. I also request that they be made part of the record.

Please accept my thanks. With best wishes, I remain

Sincerely,

Harold L. Volkmer
Member of Congress

HLV/jp
Enclosures

James

CHRISTOPHER S. BOND
Governor

EDWARD D. DANIEL
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Missouri State Highway Patrol
State Fire Marshal
Peace Officer Standards and Training

DATE DEC 21 1984 DOC# 4214
AIDE GP REC# 15-388
CATS:
PARA:

December 21, 1984

The Honorable Harold L. Volkmer
United States House of Representatives
2465 Rayburn House Office Building
Washington, D. C. 20515

Dear Representative Volkmer:

Thank you for the copy of the 55 M.P.H. study, your interest in highway safety, and the opportunity to respond to the issue of the National Maximum Speed Limit of 55 M.P.H.

There are a number of considerations to take into account when discussions arise concerning revision of the emphasis on the speed limit. Missouri is probably not unique in their statutes concerning the 55 M.P.H. limit, in that all roadways having a previous limit exceeding the NMSL resulted in having those limits reduced to 55 M.P.H. The critical issue is specified in Chapter 304.009 RSMo, section 5 . . . "This section shall expire thirty days after the repeal or expiration of 23 U.S.C. Section 154, or ten days after the provisions mandating the fifty-five mile-per-hour speed limit are rendered inoperative for any reason."

The indication is that any recision of 23 U.S.C. Section 154 would, within thirty days, put Missouri speed limits back to the previous limit on all roadways. Upon repeal of the provisions mandating the NMSL, all roadways would go back to their previous limit in ten days. Although there may be some supporting evidence to indicate that higher speeds on the rural interstate system would not have a significant impact on the fatality rate, higher speeds on U. S. and state numbered and lettered highways most certainly would yield significantly higher fatality rates.

The problem, therefore, is addressing different speeds on different roadways without having a detrimental effect on all highways in the state.

It is feasible to allow states to set their own limits on rural interstate highways, but only if specific criteria is established concerning highway conditions, fatality rates, and traffic volume. As pointed out earlier, many states have statutory conditions similar to Missouri.

Different states may well develop their own criteria for a definition of "rural interstate", if federal emphasis indicates a change in speed limits on such highways. Again, a difficulty in uniformity among the states and even within the state could be precipitated by varying speeds on interstate highways. For purposes of defining "rural interstate" it would be consistent with our present definition of rural to indicate that interstates outside the jurisdiction of any political subdivision with a population of 5,000 or more would be rural.

The study confirms the benefits of reduced speeds and the resulting economic benefits through lives saved, reduced trauma, less fuel consumption, and fewer federal disability benefits. The increased travel time required at lower speeds is a fair trade-off for the many benefits derived from the 55 NMSL.

An entire generation of drivers have been exposed to the 55 M.P.H. speed limit and have never driven legally above that speed. This factor coupled with the increase in smaller vehicles designed for slower speeds lends additional credence to maintaining the present speed limits.

Again, thank you for providing the opportunity to address this important issue.

Sincerely,

Glenn L. Baker
Acting Director

GLB/RNE/sch

John Ashcroft
Governor

Richard C. Rice
Director

DEPARTMENT OF PUBLIC SAFETY
MISSOURI STATE HIGHWAY PATROL

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FEB 3 1985
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REC# 9065
CATS:
PARA:

January 30, 1985

Honorable Harold L. Volkmer
Congress of the United States
Washington, D. C. 20515

Dear Congressman Volkmer:

We have had the opportunity to conduct an in-depth analysis of the report "55: A Decade of Experience", from the committee for the study of the benefits and costs of the 55 mile-per-hour National Maximum Speed Limit, as well as a study of our own accident and speed statistics. After reviewing the results of these studies, it is the recommendation of the Missouri State Highway Patrol to retain the 55 mile-per-hour National Maximum Speed Limit.

There is no doubt that significant costs in terms of time as well as other costs are incurred through the imposition of this law. However, we feel that these costs are justified in light of the savings in human lives and the reduction of serious injuries.

Another recommendation of the Missouri State Highway Patrol concerns the standard for measuring state compliance. We believe a weighted system as proposed by the committee provides a much more realistic and fair system of reporting. A weighted system would encourage the states to concentrate on areas of high speeds regardless of which class of highway these speeds come from. By concentrating on these higher speeds, the variance of speeds will be narrowed which should result in a safer driving environment.

The Missouri statute that imposes the 55 mile-per-hour speed limit (304.009 RSMo.) is tied to the federal statute (23 USC 154), with our statute becoming void thirty days after the federal law expires or is repealed. It would be beneficial, therefore, to allow sufficient lead time for states who might want to enact legislation to retain the 55 mile-per-hour speed limit in the event of a change in the federal statute.

January 30, 1985
Honorable Harold L. Volkmer
-2

We would like to thank you for the opportunity to provide these recommendations and express our opinion on this important consideration. We hope that this information is useful to you and that you will call on us if there is any further information we may provide.

Sincerely,

H. J. Hoffman

H. J. HOFFMAN
Superintendent

Before the

Subcommittee on Transportation, Aviation and Materials
Committee on Science and Technology
U. S. House of Representatives

MARCH 4, 1985
WASHINGTON, DC

Comments of

American Trucking Associations, Inc.

for the record on
55 Mile-Per-Hour National Maximum Speed Limit

Foreword

The American Trucking Associations, Inc. (ATA) appreciates the opportunity to comment on the 55 mile per hour (mph) National Maximum Speed Limit and whether or not the national speed limit policy should be retained without change.

ATA is located at 2200 Mill Road, Alexandria, Virginia 22314. It is a federation with affiliated associations in every state and the District of Columbia. In the aggregate, ATA represents every type and class of motor carrier in the country, both for-hire and private.

The comments herein were prepared by the Technical Services Group of ATA. The commments are based on trucking industry activities, experience and positions during the ten years that the 55 mph National Maximum Speed Limit has been in effect.

Issue Manager: William. E. Johns
Managing Director
Technical Services Group

Introduction

ATA supports continuation of the 55 mph National Maximum Speed Limit. ATA's position has been unchanged since its Executive Committee expressed unanimous support for the temporary 55 mph national speed limit in 1974 and for the permanent 55 mph National Maximum Speed Limit in 1975.

ATA's position in support of 55 mph has been reaffirmed several times. In August, 1984, ATA President Thomas J. Donohue expressed opposition to proposed legislation which would have allowed states to establish a maximum speed limit of up to 70 mph for any portion of an Interstate Highway located outside of a unit of local government with a population of 50,000 or more. In commenting on the proposed legislation Mr. Donohue stated:

> "There is a very strong possibility that increasing the speed limit could result in heavy cost burdens for the trucking industry and a loss of the safety and fuel efficiency benefits that have derived from 55."

ATA has reviewed the findings and recommendations of the "Committee for the study of the benefits and costs of the 55 MPH National Maximum Speed Limit" of the Transportation Research Board, (TRB). This study, done at the request of Congress, recommends that the 55 mph speed limit be retained on most highways now posted at that limit. The recommendation, however, opens the door for consideration of higher speed limits than 55 mph on some highways. ATA cannot fully support the recommendation.

The TRB Committee found that the 55 mph National Maximum Speed Limit provides lifesaving and fuel saving benefits. The TRB study points out that "The economic cost of additional travel time is partly offset by reduced fuel, maintenance, and insurance costs, and as a result, most large trucking firms support the 55mph speed limit." This is, in fact, the case for trucking firms of all sizes. The current ATA position had its roots in the fuel crisis of 1973. The trucking industry supported a reduced speed limit because it was a practical way of conserving fuel....the lifeblood of the industry.

Today the industry continues to support the 55 mph National Maximum Speed Limit because:

- It has reduced the incidence of truck-related fatalities and injuries;
- It conserves fuel;
- It offsets, in part, increases in fuel costs;
- It results in less wear and tear on equipment; and
- It reduces splash and spray.

In the past, studies have shown that splash and spray from trucks is one of the major irritants for the motoring public. The studies have also shown that the amount of splash and spray is reduced when the speed of trucks is reduced. Therefore, one of the obvious, although unmeasured, safety benefits of the 55 mph limit is the reduction of truck splash and spray from the amounts at higher speed limits.

Reduced Fatalities and Injuries at 55 MPH

In its study, the TRB Committee found that the 55 mph speed limit reduced highway fatalities to such an extent that "safety soon became the paramount issue surrounding the 55 mph speed limit." The trucking industry has similar findings. The major benefit for motor carriers has been reduction of accidents, fatalities, injuries and accident severity from what it probably would have been at higher speed limits. Truck mileage rose sharply from 1973, the year before the 55 mph speed limit was instituted, to 1983, a ten year period. For example, the mileage for combination trucks, mostly tractor semitrailers, increased 37.5 percent to 66,029,495,000 in that time. Yet truck- related fatalities reported to the Bureau of Motor Carrier Safety of the U. S. Department of Transportation decreased 17 percent to 2,528. Truck accidents increased only 2.3 percent to 31,628 and injuries in that time period were reduced by 24% to 26,692.

Severity of truck accidents, expressed in a ratio of reportable accidents to fatalities and injuries was reduced considerably. In 1973 there were 10.1 accidents for each fatality reported to the Bureau. This figure improved to 12.5 reportable accidents per fatality in 1983, an improvement of 24%. In 1973 the ratio of reportable accidents to injuries was .88 to 1, more than one injury per reportable accident. By 1983, this had improved by 34% to a ratio of 1.18 accidents per injury.

Fuel Efficiency of Trucks at 55 mph

Motor carriers know that fuel efficiency of trucks is improved at 55 mph, in comparison with higher speeds, because of their own operating experiences, and because of numerous fuel efficiency tests that have been conducted by the Federal government in cooperation with the trucking industry and others.

For example, in 1974, tests by the Federal Highway Administration in cooperation with two large motor carriers showed that truck fuel consumption at 60 mph is up to 10 percent greater than at 55 mph.

In 1978, the National Highway Traffic Safety Administration, through its Voluntary Truck and Bus Fuel Economy Program challenged the trucking industry's independents---those drivers who operate their own trucks---to prove their vehicles could be as fuel efficient at speeds above 55 mph as at 55 mph. The independents lost.

Using their own vehicles and setting their own speeds above 55 mph, they used more fuel than they did when operating the same vehicles under the same conditions at 55 mph.

Furthermore, many trucking companies have run their own tests of fuel efficiency with approval and supervision of law enforcement agencies, or on test tracks, and they are convinced that the potential savings in fuel and fuel costs are substantial at 55 mph. One large motor carrier, for example, achieved fuel savings of 51,000 gallons in one month following the conduct of tests which showed that 55 mph is 13% more fuel efficient for its vehicles than higher speeds. The savings of 51,000 gallons of fuel per month reduced that company's fuel costs by more than one-half million dollars a year.

One of the nation's largest motor-carriers, tested fuel efficiency by operating identical units over the same route at different speeds. Fuel efficiency for the vehicle operating at 55 mph was 32 percent better than for the other vehicle which was operated at 65 mph. The company has thousands of vehicles and so its savings by operating vehicles at 55 mph are substantial.

There is no test nor is there any engineering data, which show that trucks are as fuel efficient above 55 mph as they are at 55 mph--regardless of the make of truck, the nature of its engine and driveline components, or when it was built.

Newer trucks are even more fuel efficient at 55 mph and many are geared so that they cannot be operated at excessive speeds. For example, the nation's larger motor carriers have been purchasing new truck tractors over a period of many years which have a maximum speed of less than 60 mph. Such vehicles are eight percent more fuel efficient than older trucks which the companies operated. For one company which travels 446,000,000 miles per year savings are more than ~~five~~ million gallons of fuel annually. Other motor carriers have achieved comparable savings through the use of fuel efficient vehicles.

Reduced Wear and Tear on Equipment at 55 mph

Motor carriers have also realized savings on tires, engines and other components because the wear and tear on equipment is much lower at 55 mph than at higher speeds. Equipment and maintenance experts employed by motor carriers report that their records show the life of equipment is stretched and the costs of replacement parts and labor for maintenance work are reduced significantly by the operation of vehicles at reduced speeds.

Compliance with 55 mph Speed Limit

The TRB study points out that average speeds have crept upward but that they are still far below the average of 65 mph which prevailed in 1973. The study also asks if decreasing compliance, along with slipping public support and an apparent lack of support in some state legislatures will ultimately lead to the nullification of the law; it asks if widespread noncompliance breeds disrespect for law generally; and it asks if the laws of each state are a substantial deterrent to speeding.

The trucking industry problems of compliance with the 55 mph speed limit are similar to those of the general motoring public. The majority speak out and drive in support of 55. Others oppose 55 and will substantially exceed the speed limit. Some truck drivers speed to reach a delivery point before its closing time so that they will not have to wait 12 or more hours to make the delivery when the customer reopens. For independents -- owner operators of trucks -- such delay means loss of income and possible loss of a return load to another trucker. Some drivers will speed for personal reasons, such as the desire to get home in time for a family event or social activity. Other drivers speed just because they like to drive fast. None of these driver types is in the majority and it is the trucking industry view that their speeding is not justified for any reason.

Trucking Industry Programs

To improve compliance with the 55 mph speed limit, the industry has adopted numerous monitoring, enforcement and incentive programs, as well as educational materials designed to promote driver compliance with the speed limit.

Most of the state trucking associations affiliated with ATA have passed resolutions and adopted programs in support of the mph speed limit. In California, trucking industry middle and t management personnel, numbering 1,200 people, became part- time ro patrolmen observing and reporting on truck speeds to the tru owners. Additionally, the California Trucking Association develop and distributed report forms for use by the general public to repo truck infractions to it.

Both ATA and California Trucking Association have "hotlin telephone systems for use by the public to report instances c speeding trucks, and truck drivers engaging in other unsaf activities.

The Minnesota Motor Transport Association developed an 8 poin program with the theme "Professionals Drive 55". The program in volves increased road patrols by industry safety personnel, safet meetings in rest areas, bumper stickers, lapel buttons,printe literature, report forms for public use to report truck violations public service announcements, and pledges of compliance with the 5 mph speed limit by motor carriers which are members of th Association.

There have been many other dynamic programs by motor carrier and state trucking associations, frequently in cooperation with la enforcement officials, designed to keep truck speeds within th limits. These programs have been effective. They have resulted i reduced truck speeds through the years, and in greater uniformity of truck speeds with that of other traffic.

The 55 MPH Speed Limit is Effective

The level of speed shown in the TRB study and observations of truck speeds indicate that the national limit of 55 mph is effective in keeping speeds down, even among violators. Lower speeds mean greater uniformity of traffic flow, a reduction of accident potential and a reduction of severity if an accident occurs.

The extent to which the public is driving close to the speed limit indicates that the safety benefits of 55 mph can be sustained, and that decreasing compliance has not reached a point where there needs to be concern that lack of support for the speed limit in some state legislatures will ultimately lead to the nullification of the law. It is the ATA view that any trend toward increased speeds can be reversed if the Administration and the Congress stand more squarely behind the national speed limit policy and if the enforcement capability of police agencies is maintained and improved.

If higher speeds are allowed on some roads this will be a strong indication of lack of support for the 55 mph speed limit by national officials. If higher speeds are allowed on rural Interstate highways with low traffic densities, there would soon be a move to allow similar speeds on other highways during periods of time when traffic densities are low. Even if the higher speed limits were established and limited to some rural Interstate highways, we perceive an adverse impact on safety that would be much greater than the 500 additional fatalities, and ten million dollars in additional program costs estimated by the TRB Committee. Many drivers have difficulty adjusting their speed downward after moving from a high speed highway onto one with lower speeds and so will be out of step with other traffic thereby increasing the potential for accidents.

Eventually, the results of allowing higher speed limits on some highways would be total elimination of the 55 mph National Maximum Speed Limit and the benefits derived therefrom.

Continued Trucking Industry Support for 55 mph

The trucking industry, today, strongly supports the 55 mph speed limit. This is primarily a result of the savings of lives and the improvement in accident experience and accident costs. It is also because of fuel savings and the reduction in wear and tear on equipment. In addition many motor carriers have purchased trucks with reduced maximum speeds, and have incurred considerable expense and effort in relocating facilities, drivers and families of drivers to reschedule trips so that they can be completed in compliance with the 55 mph speed limit and the 10 hour driving limit imposed by the Bureau of Motor Carrier Safety.

The trucking industry does not support changes in the national policy which would necessitate, for competitive reasons, the purchase of new and faster trucks at a cost of more than $60,000 each, and the uprooting of drivers and their families to new locations as a result of lengthening trips and changing the origin and destination points of drivers.

The trucking industry believes that greater compliance will result from increased enforcement, from industry programs and from the purchase of more trucks with lower maximum speed capabilities. This potential will be lost if the states are allowed to set speed limits of their own choosing. It will be lost if the Congress fails to show its continuing support for the 55 mph National Maximum Speed Limit.

In summary, the trucking industry continues to support 55 mph as the National Maximum Speed Limit. It opposes changes in the national policy on speed limits.

BICYCLE
★★USA★★

SUITE 209, 6707 WHITESTONE RD., BALTIMORE, MD 21207 301/944-3399

February 28, 1985

The Honorable Dan Glickman, Chairman
Subcommittee on Transportation, Aviation and Materials
U.S. House of Representatives
2435 Rayburn House Office Building
Washington, DC 20515

Dear Representative Glickman,

Please find attached a position statement on behalf of bicyclists regarding the 55-mph national speed limit. Please add this statement to the record for the Subcommittee on Transportation, Aviation and Materials hearing, held on Thursday, February 21, 1985.

As the national organization of bicyclists, BICYCLE USA opposes raising the 55-mph national speed limit. Our objections, as outlined in the attached statement, are based on the hazards created by increasing the differential in speed between bicyclists and other road users. The potential for more frequent and more severe bicycle/motor vehicle accidents presented by such action is a very real concern for our members and the bicycling public.

Thank you for offering this important opportunity to openly discuss the 55-mph national speed limit. The Subcommittee's session and the hearing record provide a valuable forum for public comment on this issue. If you have any questions regarding the information in the enclosed statement, please let me know.

Sincerely,

Peggy R. Skonecki

Peggy R. Skonecki
Government Relations Coordinator

BICYCLE
★★USA★★

SUITE 209, 6707 WHITESTONE RD., BALTIMORE, MD 21207 301/944-3399

Statement for the Hearing Record on the
55-MPH SPEED LIMIT
Subcommittee on Transportation, Aviation and Materials
Committee on Science and Technology
U.S. House of Representatives

By Peggy R. Skonecki, Government Relations Coordinator
BICYCLE USA/League of American Wheelmen

BICYCLE USA/League of American Wheelmen is the national organization of bicyclists, with more than 20,000 members in all fifty states. In keeping with its corporate purpose "to advance and defend the rights and interests of bicyclists," BICYCLE USA opposes increasing the national maximum speed limit of 55-mph.

Bicycles are vehicles in 48 of the 50 states. (Similar legislation is now being considered by the Iowa state assembly.) As vehicles, bicycles are accorded legal rights as users of the roadway; bicyclists are a legitimate part of the traffic mix, just as motorists, truckers, and motorcyclists. However, the operating characteristics of bicycles make them particularly vulnerable to high speed motor vehicle traffic.

The differential in speed between bicyclists and other road users is increased when posted speed limits are increased. The practical limit on bicycle speed is 15 to 25 mph, with perhaps a maximum speed somewhat higher on a steep decline. This range is unaffected by any increase in posted speed limits. An increase in the posted speed limit consequently increases the difference in speed between bicycles and other vehicles from an average variance of about 35-mph to a potential difference of 45 or 50-mph. This increase in speed differential increases the force of an impact in case of accident. A greater impact often results in increased severity of injury.

The safe stopping distance needed to prevent accidents is effectively extended by increased speeds. The distance traveled before reaching a stop increases exponentially with speed. Given the relatively low visibility profile of bicyclists, greater stopping distances produced by higher speeds increase the potential risk of accident and injury for bicyclists. The Consumer Product Safety Commission has recognized bicyclists' lack of conspicuity as "one factor contributing to fatal nighttime bicyclists accidents." Even well-equipped cyclists depend in part on reflectors for nighttime protection. Higher speeds decrease the response time available to a motorist from the time his or her lights illuminate a reflector and the motorist perceives the cyclist to the time the motorist overtakes the bicyclist.

The increase in turbulence from passing trucks and other large vehicles (the wind blast effect) caused by an increase in speed limits presents an additional hazard to bicyclists. Based on a study by the Society of Automotive Engineers, the Federal Highway Administration estimates a bicyclist's tolerance of wind blast at 3 to 3½ pounds of force. At 50-mph, a truck passing within four feet of a cyclist exerts 3½ pounds of force. At 70-mph, this turbulence doubles to a force of seven pounds. This increased force affects the ability of cyclists to control their vehicles and, consequently, their ability to avoid accidents.

Bicycling's public benefits include energy conservation, improved air quality, low-cost transportation, and promotion of public health. Encouraging use of bicycles for transportation has been identified as in the best interest of the public by the study "Bicycle Transportation for Energy Conservation" (U.S. Department of Transportation, April 1980) and by several acts of Congress, most recently the Surface Transportation Act of 1982. An increase in the national speed limit will increase the real and perceived hazards to bicyclists, thereby discouraging travelers from taking recreational or utilitarian trips by bicycle.

In summary, BICYCLE USA/League of American Wheelmen recommends that the current national maximum speed limit of 55-mph be retained.

TESTIMONY SUBMITTED TO: COMMITTEE ON SCIENCE AND TECHNOLOGY
U. S. HOUSE OF REPRESENTATIVES
WASHINGTON, D. C. 20515

SUBJECT: NATIONAL 55 M.P.H. SPEED LIMIT

WITNESS: MR. HOOVER B. LIDE, STATE CO-ORDINATOR
CITIZENS COALITION FOR RATIONAL TRAFFIC LAWS
11433 SURRY ROAD
CHESTER, VIRGINIA 23831
(804) 748-0021

RESUME:

Graduate of General Motors Institue, Flint, Michigan, recently retired from state government. State service included seven (7) years with the Department of State Police. In this position, served as an aircraft crash investigation specialist reporting to Cornell University Crash Injury Research Institute, the Civil Aeronautics Board and the State Corporation Commission as well as the Department of State Police. Along with other State Troopers, performed automobile crash and injury research investigation likewise for study by Cornell University.

Experience includes 12 years as Director of a state agency and 3 years in private business. Currently working part time as a consultant to governmental and private agencies.

TESTIMONY

It is my purpose, as a private citizen and in behalf of other citizens, to implore this distinquished committee to examine certain assumptions that tend to be asserted as unqualified facts and further, to consider the unjustified costs and sanctions imposed on the vast majority of our citizens who are safe drivers.

BENEFIT CLAIMS: It is asserted that the National 55 M.P.H. speed limit has saved lives and prevented serious injuries in Virginia. In support of this assertion is the fact that in 1974 traffic deaths declined by 170 from the 1973 record of 1220. This had been attributed to the imposition of the 55 mph speed limit.

FACTS: During 1974, vehicular mileage travelled declined between one and two billion miles and the number of registered vehicles declined by some one hundred thousand. This is far more likely to have influenced the on going reduction of highway fatalities than the speed limit.

(See Exhibit 4)

During the prior 10 year period of 1964 through 1973, the death rate steadily declined from 5.4 per hundred million vehicle miles to 3.5 in 1973, a 65% improvement without the benefit of the national 55 mph speed limit. (See Exhibit 1).

During the subsequent 10 years from 1973 through 1983 the death rate has continued to decline from 3.5 to 2.2 in 1983; a 63% improvement, a rate that is actually not quite as good as that of the 10 years immediately prior to the imposition of the speed limit.

HOW MUCH IMPROVEMENT WAS POSSIBLE IN VIRGINIA BY IMPOSING THE 55 MPH SPEED LIMIT?

In Virginia, the existing speed limits were such that there was no significant change other than on interstate highways. 1973 statistics reveal that;

Only 8.4% of all fatal accidents occured on interstate roads.

88% of all fatal accidents occured at speeds below 55 mph.

Whereas, 91.6% of all fatalities occured on highways that were not effected and 88% of all fatality victims were traveling at speeds that were not effected by the national 55 mph speed limit the remote possibility that any lives or injuries were actually saved in Virginia purely as a result of this law must be weighed carefully against the burdens and costs imposed on all of the vast majority of highway users who are not contributing to traffic crashes. The records show that 3.2% of all licensed Virginia drivers were involved in all 1983 traffic crashes. (Please note that "involved" does not imply negligence. Many of those "involved" were innocent victims.)

Now, for the sake of freedom, liberty, justice and all that we hold dear in this great country of ours, take a good look at the restrictions, penalties and costs that have been imposed on the 96.8% of our citizens who are not involved in traffic crashes, and who have committed no crime other than to drive at speeds that our interstate highways were designed to accomadate safely:

1. The extraction of millions of dollars in fines and costs.
2. The threat of revocation of driving privileges.
3. Millions of dollars in arbitrarily increased insurance premiums.

Our highways were designed in Virginia to meet our needs. Our highway engineers, safety engineers, Motor Vehicle Division and State Police are second to none. No one in the world knows our traffic control needs better than our elected state officials. Traffic control is state business. Turn it back over to the states where it belongs!

Thank you for considering my testimony.

Hoover B. Lide
Hoover B. Lide
Feb. 4, 1985

EXHIBIT 1

Death Rate Per Hundred Million Vehicle Miles

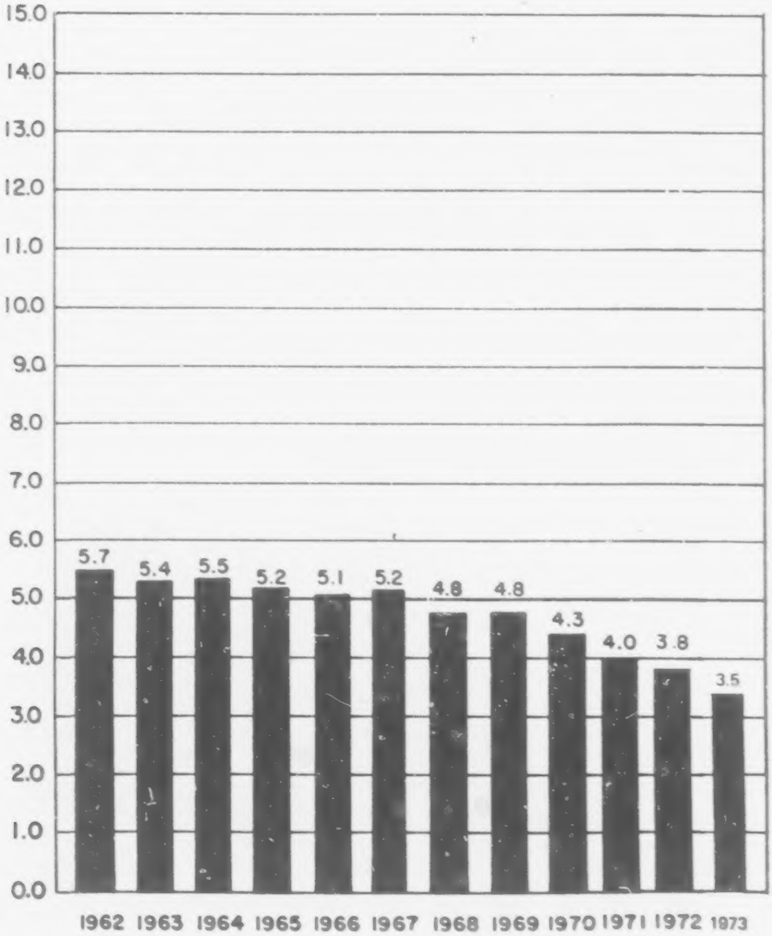


EXHIBIT 7

Death Rate Per Hundred Million Vehicle Miles

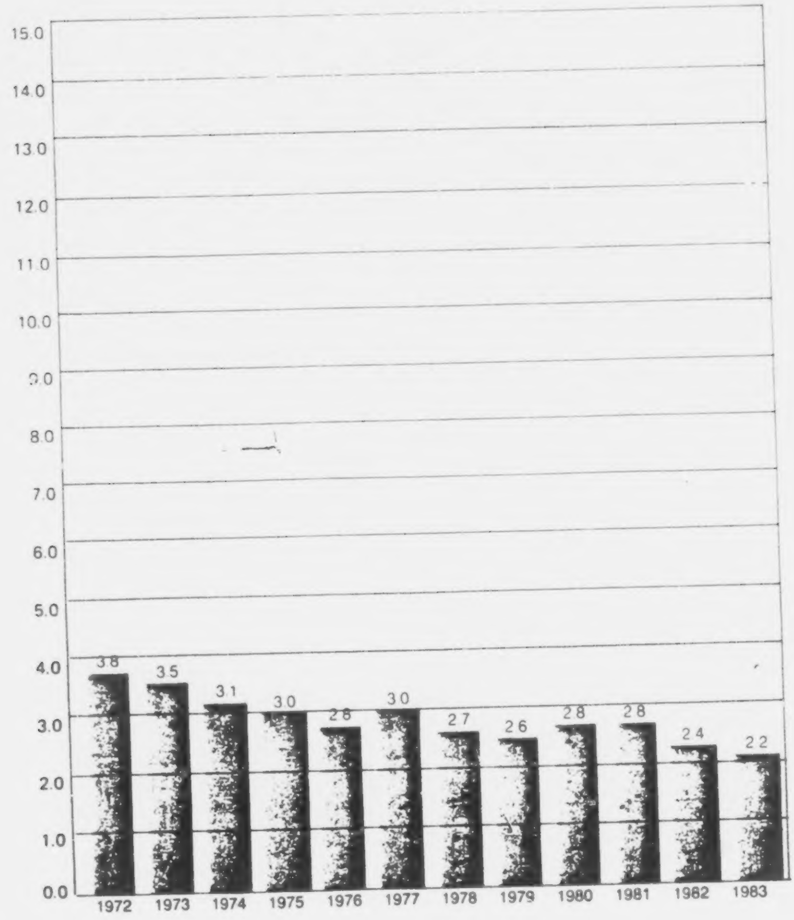
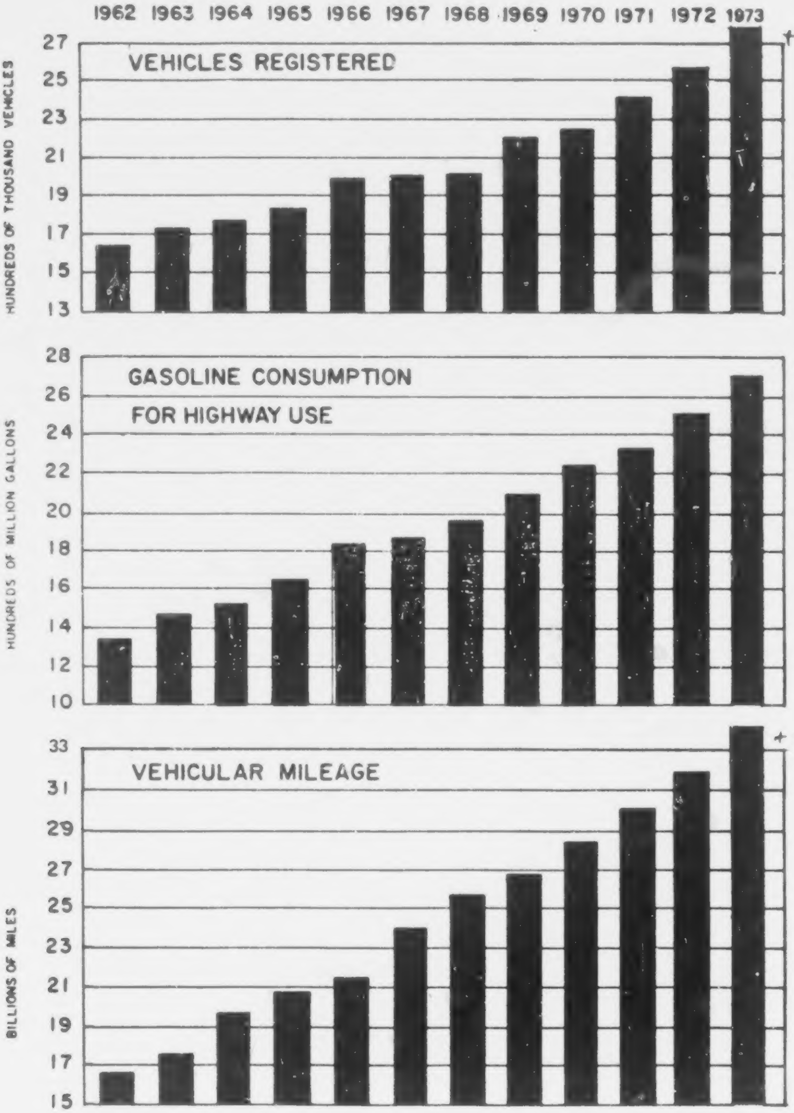


EXHIBIT 3

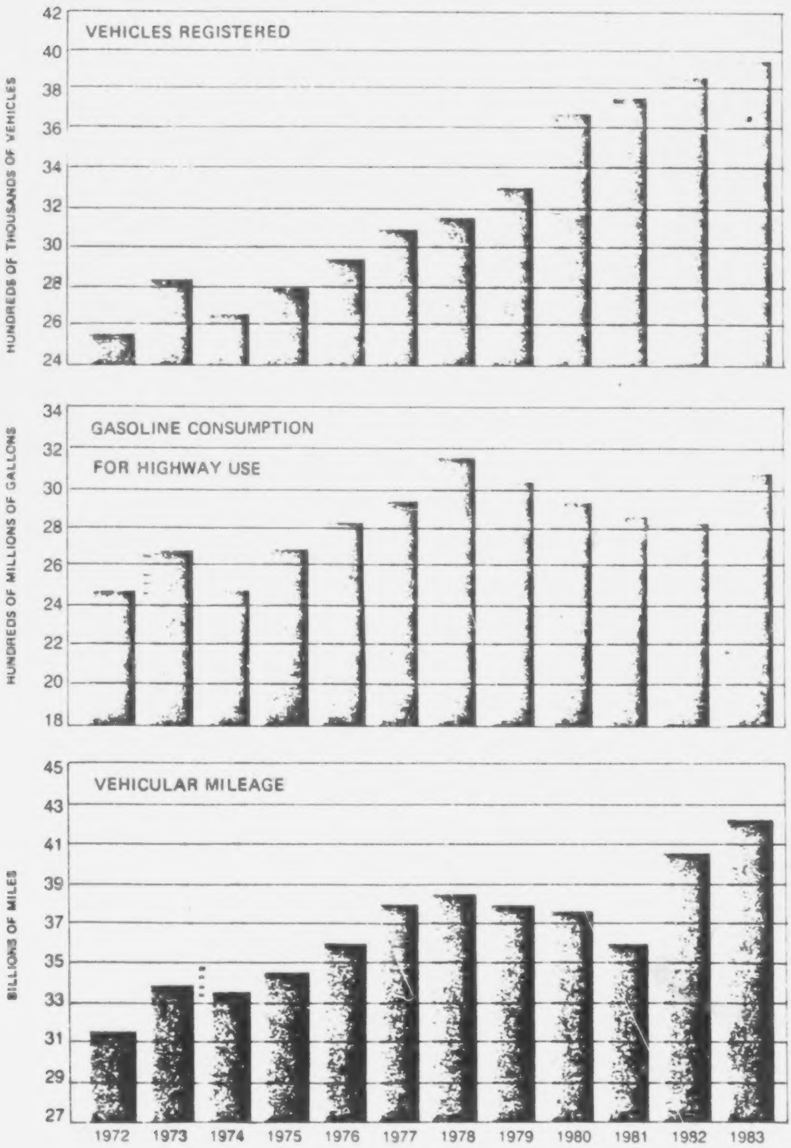


+700,000 vehicles

600 Million Gallons

+7 Billion Miles

EXHIBIT 4


VEHICLES REGISTERED
HUNDREDS OF THOUSANDS OF VEHICLES
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GASOLINE CONSUMPTION
FOR HIGHWAY USE
HUNDREDS OF MILLIONS OF GALLONS
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BILLIONS OF MILES
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What has cost over $200 million to enforce,
wasted 102 man-years for every life it's supposedly saved,
turned one more government office into a pack of liars,
and made us a nation of lawbreakers?

The 55-mph Speed Limit

And you can do something about it.

BY PATRICK BEDARD

• Ol' Willie Nelson really has a way with the lyrics. To boost the 55-mph speed limit, he did a public-service spot for the Texas Office of Traffic Safety a while back. "Shotgun Willie likes to save the gas and stay alive. Shotgun Willie likes to drive laid back at 55," he sang.

This is the same ol' Willie Nelson whose record of traffic offenses was so appalling that Texas would allow him on the road only during working hours, which, for a country-and-western singer, were deemed to be the period from 4:00 p.m. to 2:00 a.m. Willie's habits run more to drinking than to speeding. "Drinking is the natural thing to do because it's fun," he told *People* magazine. "I like to drive on tequila." *Whoooee!* Another double-nickel advocate bites the credibility dust.

Poor Willie. He's lived a tortured life, and we're not looking to make it any worse. We only mention his example because it's typical of the half-truths and loaded statistics used by various government agencies and assorted do-gooders over the last ten years to prop up the 55-mph National Maximum Speed Limit, as it's properly known in the bureaucracy.

We are now in the tenth year of the 55. The slow-down-to-save-gas response of a few states to the first Arab oil embargo in the fall of 1973 was made a temporary federal policy in January 1974. One year later, Congress voted it permanent.

Ten years is enough, we think, for such a Luddite adventure in stalemating progress. It's time the citizens looked behind the propaganda to see what's really going on. When you do, you'll find the same bloated claims a self-serving government used in its "body counts" to justify all the good it was doing in the Vietnam War—only this time we motorists are the targets of all the good. Big government, always on the lookout for ways to make itself bigger, has noticed that we send our suits out to dry cleaners and our muffler repairs to mechanics, and it would very much like for us to send our thinking down to Washington. After all, a decision about how fast to get down the highway is much too important to be left to us rubes and hicks, folks so dumb our heads can be turned by a few guitar twangs from a country-and-western sinner. Still, as we tell you more of the hypocrisy and deceit used to promote the speed limit, you may conclude that Shotgun Willie is the most reliable salesman the government has.

Originally, the 55 was adopted purely to save fuel. As an emergency measure, slowing down had strong appeal, but then the public realized that of all the cars moving about at any given moment, the overwhelming majority were on roads too congested for exceeding 55 in the first place. As a result, the best-case estimates of fuel savings were only about three percent—a trivial amount, the same improvement that would come if every driver made sure his tires were properly inflated.

Besides, fuel economy is much more dependent on car design than on car speed. Our tests have shown that small cars running flat out at 90 mph get better mileage than the big ones do at 55. So if we really want to save fuel, the law should encourage efficient cars. Regulating speed misses the point—like prescribing glasses for a guy who is going deaf—and therefore has largely been discredited. It's just another case of Congress going off half-cocked.

So supporters of the 55 have had to switch over from fuel saving to lifesaving to justify their position. They all resort to body counts, numbers of lives saved. And as we learned in Vietnam, nobody's count is as big as that of a government agency—in this case, the National Highway Traffic Safety Administration.

Everybody starts from the same set of numbers, of course: the annual traffic fatalities before and after the speed limit came into effect. There were 54,052 traffic deaths in 1973, the last year before the 55; the annual total dropped to 45,196 in 1974 and 44,525 in 1975, then rose to 45,523 in 1976, to 47,878 in 1977, to 50,331 in 1978, to 51,093 in 1979, and to 51,091 in 1980, then began dropping again to 49,301 in 1981 and 44,100 in 1982. The first year's reduction of 8856 was dramatic. To Naderites and newspaper columnists who really wanted to cement the speed limit in place, it became the number of lives saved by the 55.

Fortunately, not everybody is so gullible. A lot of things changed from 1973 to 1974: the fuel shortage caused a drastic reduction in miles driven, government-required safety equipment was being added to new cars for the sixth consecutive year, continuing reconstruction made highways safer, and traffic-law enforcement nearly doubled, judging by the number of tickets written. It's clear that a lot more was going on than just a 55-mph speed limit.

Academics from various universities and think tanks, and bureaucrats from various government agencies, began sorting through the data to see what could be realistically credited to the 55. The going was rough. It was like trying to figure how many angels can dance on the head of a pin—not only does nobody know, nobody even knows how to find out. But the estimates started piling up. A study from the University of North Carolina thought it probable that about a quarter (2215 on a national basis) of the reduction in fatalities could be credited to the 55. The American Association of State Highway and Transportation Officials said 35 percent (3100). Robert Binder, in *Traffic Engineering*, said 3190. Chu and Nunn, extrapolating from a California base, said 3900. Enustun, Nejad, and Yang decided 3800 lives were saved. And the National Safety Council—which has been on a slowdown campaign forever, so you would expect its estimate to be high—settled upon 4800. The federal government's own NHTSA originally talked numbers around 4500, far higher than the estimates by the universities and the state officials. Then in June 1977 it raised its guess to 6000. And as Carter's presidency continued to bog

CAR and Driver

down, with rampant inflation at home and the ayatollah holding Americans prisoner in Iran, the speed limit was used as a political diversion. Joan Claybrook shrilly announced in October of 1979 that her NHTSA had rejuggled the numbers and, actually, 7532 lives had been saved the first year, and that a total of 41,951 innocents had been kept from their graves through 1979 by the 55-mph NMSL.

This figure—"estimate" would be giving it too much credit—is so transparently bogus that when you challenge the NHTSA spokesmen on it, they back down immediately. "Well, it's kind of a maximum possible," they say. Nonetheless, that's the official number, put out with the full imprimatur of the federal government. It comes up as "lives saved" in the *New York Times*, in the *Washington Post*, in *USA Today*, on television, over the radio, and in the local penny-saver. The fact that it's two to three times larger than independent estimates helps the government justify the jobs of its ever growing pool of bureaucrats and the expenditure of ever greater wads of our money. To continue the good work, Claybrook was giving $50 million a year to state and local agencies to enforce the double-nickel.

The NHTSA said the 55 saved 4500 lives in 1974. No, make that 6000. Would you believe 7532?

The media repeat these inflated body counts mostly because the reporters are too lazy to do their homework. But some publications have their own stake in the hysteria. Take the *Reader's Digest*, the largest-circulation magazine in the world. It's been boosting its readership since 1935 by printing blood-and-gore-on-the-highway articles, apparently the best horror stories a nonfiction magazine can find. But a little *National Enquirer*–style creativity makes the stories even better. The April 1981 *Digest* contained a particularly effective piece titled "Fifty-Five Is Fast Enough," particularly effective because it was bylined by Roger Penske and used his winning reputation as a race driver and team owner to set him up as an expert witness who could shout down all the growing criticisms of the 55.

The *Reader's Digest* likes to pretend its skirts are above the muck, and one of its editorial staff hung up on us when we called to suggest that they might have affixed Penske's name to somebody else's work. But, in fact, that's what happened. The piece was requested by *Reader's Digest* management and written by Gerald M. Bastarache, a media flack at the Highway Users Federation in Washington, D.C., which is a lobby of businessmen who benefit from the nation's highways. They press for legislation favorable to their transportation interests and occasionally support politically popular causes such as the 55, so as to have a few bargaining chips in their lobbying. And they can stick Roger Penske's name on an article created for the *Reader's Digest* because he's the chairman of the Automobile Safety Foundation, an affiliate of the Highway Users Federation. The *Reader's Digest*, in turn, likes to take the credit for scaring the ASF into existence in 1936 with its original car-carnage story, "—And Sudden Death," in 1935.

All these conspirators—the Highway Users Federation, the *Reader's Digest* and Penske—fit together neatly here because they all find it *good business* to support the 55. Whether or not the limit

You Be the Judge

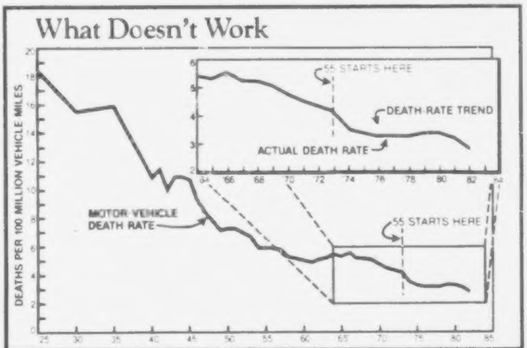
• Let's, just for a moment, give the NHTSA bureaucrats the benefit of the doubt. From 1973 to 1974, highway fatalities dropped from 54,052 to 45,196, a reduction of 8856. They'd never seen a reduction even a third as big before, and it was their job to explain it. The 55-mph limit was new, and it was the highest-profile program of the federal government that year, so, not surprisingly, it was given the bulk of the credit.

Okay, they looked at the data and drew their conclusion. Now let's look at the data ourselves, plus the data accumulated in the last nine years, and apply our own common sense. The first thing we must remember is that 1974 was not a normal year. The first Arab oil embargo was in full swing. Fuel was in short supply. People drove fewer miles; naturally, they were less likely to crash, so the data should be corrected for miles driven. The government has a statistic that takes this into account: deaths per 100 million vehicle-miles. Sure enough, that figure dropped from 4.12 in 1973 to 3.53 in the following year.

But it also fell further to 3.35 in 1975, when there was no new speed limit, and further still to 3.25 in 1976. Moreover, it had fallen continuously for eight years before the imposition of the speed limit. And the general trend has been sharply downward since the 18.2 level in 1925, when the data were first recorded. This didn't happen inadvertently, either. We've spent an enormous amount of money to build safer highways, to add government-mandated safety equipment to new cars, to provide better driver education, and to increase traffic-law enforcement. If deaths did not continue to decline, those programs would be a waste. But the fact that deaths after the imposition of the speed limit continue to decline very much on the long-term trend line suggests that the 55 is an insignificant factor.

What else could be responsible? Let's look for clues. Another huge drop in fatalities took place from 1980

What Doesn't Work



As this curve shows, the long-term trend in the highway death rate is clearly downward and it always has been. The 55-mph speed limit has not altered this trend at all. There is no evidence that the double-nickel has been a significant factor in highway safety.

works as advertised is not something they've given much thought to, if our conversation with Penske on the matter is any indication. In any case, given the *Reader's Digest's* role in the deception, it's clear that the world's largest-circulation advocate of the double nickel also bites the credibility dust.

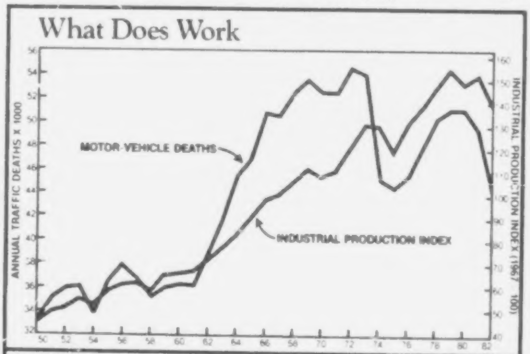
Another shabby trick used by both the NHTSA and the media is to spray out these wildly optimistic claims of lives saved and then poll the public on what it thinks about the speed limit. Inevitably, somewhere around 75 percent of those polled support the 55 to some degree because, in the words of Catherine Agazzi, a 22-year-old waitress from Corte Madera, California, who was contacted by *USA Today*, it "saves energy and lives." But what should we expect a brainwashed public to say? These responses are then used to justify further the 55: if the public supports it, it must be good.

to 1982 from 51,091 in 1980 to 49,301 in 1981 to 44,100 in 1982, the lowest figure in almost twenty years. The death rate per 100 million vehicle-miles dropped to 2.80, the lowest figure ever. Even though this safety improvement looks much like the one that occurred in 1974, you can't very well give credit to the new speed limit, because it wasn't so new in 1982. Something else must be responsible.

In looking for similarities of any sort between 1974 and 1982, one fact stands out. Both were years of serious economic recession. Probing deeper into this phenomenon, you find that every recession since World War II has been accompanied by a temporary reduction in highway fatalities. If you plot the Industrial Production Index, which is an indicator of economic vitality, and the traffic-death toll side by side, you find they move up and down in nearly perfect harmony. In contrast, traffic deaths and the speed limit show no correlation at all. Deaths also vary inversely with unemployment: as job losses go up, highway deaths go down.

These indications track too well to be coincidental. The data suggest overwhelmingly that slowing down is not the lifesaver. Instead, it appears that something about drivers' attitudes in times of recession causes them to have fewer fatal accidents. Interestingly, we're not the only ones who have discovered this relationship. The NHTSA has a study all ready to go on the subject, but it will not release the material until "the administrator decides to do so," we were told by one spokesman. When asked when that would be, he said, "Maybe never."

Obviously, advocating a speed limit to save lives is politically shrewd. Advocating a recession to save lives would be political suicide. But as long as we blindly give credit to the 55, we will never understand exactly what it is about driver attitude that profoundly affects the death rate. Looking at the data, you'd say the bureaucrats don't really want to save lives; they just want to save their programs. —*PB*



What Does Work

Highway deaths move in harmony with the vitality of the economy. When the Industrial Production Index turns upward, deaths increase, and vice versa. This suggests that driver attitude, changing with economic conditions, is a significant factor in highway safety.

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55-MPH SPEED LIMIT

There's a funny thing about that support: it's a lot like Shotgun Willie's. In a 1982 Gallup poll that showed 76 percent in favor of the limit, 29 percent admitted they had been stopped for speeding. How many more just haven't been caught? Glendon B. Craig, former commissioner of the California Highway Patrol, said that the number of tickets written by his department went up from 600,000 in 1973 to about 1.1 million each year since the 55-mph speed limit went into effect. Moreover, he said that for every violator written up, 22,000 go unapprehended. How was that again about public support? In the one poll we know of where the police were asked to estimate public support, they put the figure at about 30 percent. The part of the population in favor of the 55 apparently says one thing with its mouth and another with its foot, which doesn't contribute much to its credibility on the subject, either.

If 75 percent of the people support the 55, how come only 30 percent actually observe it?

The government's misinformation campaign on the speed limit also includes the *way* it saves lives. Speed reduction is given all the credit: "Speed Kills—Slow Down and Live." But most traffic experts, even those within the NHTSA when they drop the party line, say it's not so much average speed as it is variation in speed from one vehicle to another that really makes the difference. They all quote the famous Solomon study that says the accident rate is about the same whether the average speed is 55 or 60 or 65 or possibly even higher, as long as traffic maintains a relatively uniform pace. The 55-mph speed limit just happens to be a convenient way of compressing the variation in pace.

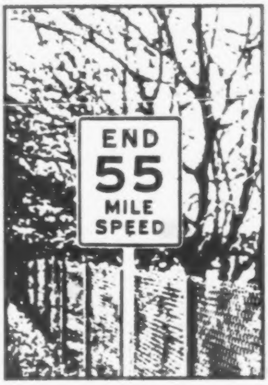
Convenient, yes, but the slowing-down part imposes very real costs that don't justify the results. Charles A. Lave, chairman of the economics department at the University of California, Irvine, calculated that it "costs 102 man-years of wasted time to save one life" with the 55. He concluded that more mobile cardiac-care units, or more kidney-dialysis machines, or smoke detectors in more homes, would save more lives at far less cost.

Lave's view is typical of those who performed their calculations without benefit of government contracts. In *The Optimum Speed Limit*, a self-financed report from the Public Research Institute, a Washington think tank, the authors concluded that "the optimal speed limit is well above 55 mph and the speed limit is an expensive way to save lives. There are better opportunities for life saving elsewhere." To quote yet another source, C. Clotfelter and J. Hahn of the University of Maryland: "Indeed, a speed limit appears to be a second—or third—best policy for achieving both safety and conservation goals."

Hmm, second or third best. Maybe that's why former president Jimmy Carter, who embraced all manner of schemes to make the United States a second- or third-rate country, came down so squarely in favor of the double-nickel. "I think the law should be enforced," he said at a town meeting in Oklahoma late in his presidency. "I think it saves a considerable amount of energy, and I also think it saves a considerable number of lives."

This is the same Jimmy Carter whose limousine, with him in it, just a little later in his presidency, was timed at an average of 72 mph for the 21.5-mile trip from Metro Airport to the Detroit Plaza Hotel. He didn't want to be late for a campaign appearance. One more double-nickel advocate—and the most sanctimonious of them all—bites the credibility dust.

We've gotten rid of Carter and his schemes for making this a third-rate country. Now it's time to get rid of the scheme that's making our public highways a third-rate system of transportation. Ronald Reagan, you may remember, was elected on a platform pledged to eliminating the 55. It's time we reminded him of some important work he has yet to do. So sign the attached post card and put a thirteen-cent stamp on it. Then send it to us so we can count up all the responses before we deliver them to the man who counts. Ten years of hypocrisy is too much. ●



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U.S. Department of Transportation

Office of the Secretary
of Transportation

400 Seventh St., S.W.
Washington, D.C. 20590

MAR 29 1985

The Honorable Dan Glickman
Chairman, Subcommittee on Transportation,
  Aviation and Materials
Committee on Science and Technology
House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

During my testimony before your Subcommittee on February 21, 1985, I promised to provide you with a copy of our Fatal Accident Reporting System for 1983. This report reviews information on fatal traffic accidents in 1983.

Thank you for the opportunity to appear before your Subcommittee.

Sincerely,

Philip Haseltine

Philip Haseltine
Deputy Assistant Secretary for
  Policy and International Affairs

Enclosure

cc: The Honorable Tom Lewis
    The Honorable Dave McCurdy

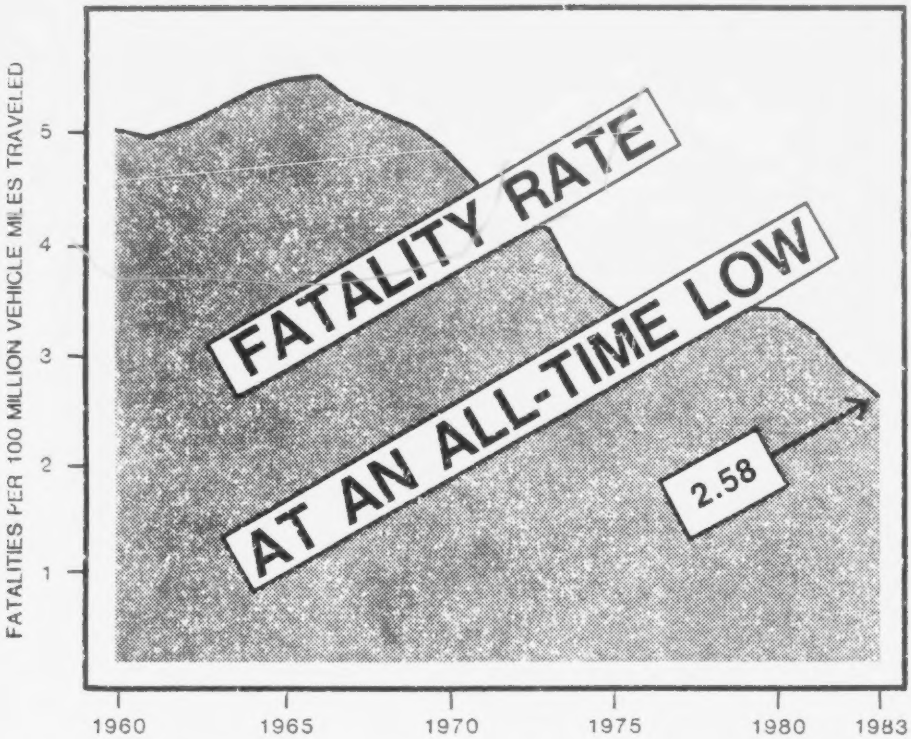
U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

National Center for
Statistics and Analysis
Washington, D.C.
20590

FATAL ACCIDENT REPORTING SYSTEM 1983

A Review of Information
on Fatal Traffic
Accidents in the U.S.
in 1983.



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FATAL ACCIDENT REPORTING SYSTEM 1983

A Review of Information
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Accidents in the U.S.
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Highlights 1983

During 1983, 42,584 men, women, and children died in motor vehicle traffic accidents. That's more than 116 people per day. This is a 3.1 percent decline from the 1982 death toll of 43,945, and a 16.7 percent decline from the 1980 death toll of 51,091. Someone died on the Nation's highways every 12.3 minutes on average throughout 1983. More than 46 percent of all accidental deaths in the U.S. during 1983 occurred on the Nation's highways.*

Following is a summary of some significant statistics on fatal accidents in the U.S. in 1983.

ALCOHOL

- More than half of all fatally injured drivers (57 percent) had been drinking, and close to half (46 percent) were legally intoxicated. Although both percentages are excessive, the percentage of legally intoxicated drivers has decreased by 4 percentage points since 1980.
- The incidence of alcohol involvement was greatest in late night and early morning accidents when 80-90 percent of all fatally injured drivers had been drinking.
- Drivers who had been drinking were virtually never wearing safety belts (only 1.6 percent used them).

SAFETY BELTS

- Only about 4 percent of fatally injured automobile occupants were wearing safety belts.
- Since 1980, child restraint use increased almost 300 percent. In 1983 more than 26 percent of passenger car occupants under the age of 5 who survived fatal accidents were using restraints. In contrast, those who were fatally injured had a use rate of only about 16 percent.
- Cars with automatic safety belts had significantly lower fatality rates than similar cars with standard belts.

FATALITY REDUCTIONS 1980-1983

- The fatality rate in 1983 was 2.58 fatalities per 100 million vehicle miles of travel, the lowest ever recorded.
- The fatality reduction from 1980 to 1983 was greater for younger drivers than for older drivers (due in part to an 8 percent drop in the population of 15-20 year olds). Male driver fatalities showed a larger reduction than female driver fatalities in most age groups.
- Single vehicle accident fatalities dropped 22 percent, about twice as much as multi-vehicle accident fatalities.
- The greatest reduction, 20 percent, occurred where the posted speed limit was between 5 and 25 mph. Fatalities on highways with a 55 mph speed limit dropped only 9 percent.
- Among days of the week, Fridays, Saturdays and Sundays accounted for more than half of all deaths. However, Saturday and Sunday had the highest reductions: 18 and 20 percent respectively. Tuesday had the lowest (12.3 percent), and the remaining days were close to the average (16.7 percent).
- During late nighttime hours fatalities dropped 24 percent. They dropped 17 percent during evening commuting hours but only 6 percent during the middle of the day.
- Subcompact car occupant fatalities increased almost 8 percent as compared to fatalities in larger cars, which decreased by almost 40 percent.
- Motorcycle, light truck and heavy truck occupant fatalities all dropped about 17 percent.
- In accidents involving heavy trucks (26,000 pounds or greater), the reduction in truck occupant fatalities (17 percent), was partly offset by increased deaths of other vehicle occupants (2 percent) and non-occupants (2 percent) who were involved in accidents with heavy trucks.

---

*Accident Facts, 1983, National Safety Council.

- Pedestrian and pedalcyclist fatalities dropped less than vehicle occupant fatalities.

OTHER CHARACTERISTICS

- Table 1 presents a ready reference for important FARS 1983 data and other national statistics.
- Head-on and angle crashes accounted for almost 80 percent of fatalities in multi-vehicle crashes.
- As in previous years, more fatalities occurred in rural areas than in urban areas.
- Interstate highways, which had an increase over 1982 in fatal accident involvements, would have had a decrease if heavy truck involvements on the system had not increased so dramatically.
- Accidents on arterial roadways accounted for more than half of all fatalities. For every traffic fatality on the Interstate System, five people died on other arterials, although travel on the other arterials is less than 2 1/2 times that on the Interstate System.
- Most deaths resulted from accidents that occurred during normal weather conditions, with only 13.2 percent of them associated with inclement weather.
- Passenger cars, light trucks, and motorcycles, in that order, were the vehicle types most frequently involved in fatal accidents during 1983 and were associated with the largest proportions of occupant fatalities.
- In 1983, 82 percent (34,840) of all motor vehicle traffic fatalities were vehicle occupants. More than two-thirds of these were drivers.

TABLE 1
1983 NATIONAL STATISTICS AND RATES

National Statistics*

Population	233,981,000
Registered Vehicles	169,446,278
Licensed Drivers	154,221,003
Vehicle Miles Traveled (VMT)	1,649,106,000,000

Fatal Accident Statistics

Fatal Accidents	37,971	
Single Vehicle		23,045
Multiple Vehicle		14,926
Vehicles in Fatal Accidents	55,099	
Passenger Cars		33,288
Motorcycles		4,141
Other Motorized Cycles		160
Light Trucks		9,870
Medium Trucks		664
Heavy Trucks		4,174
Buses		306
Special Vehicles		1,523
Unknown		973
Fatalities	42,584	
Occupants		34,840
Nonoccupants		7,744
Involved Occupants of Vehicles	90,663	
Involved Drivers		54,649
Other Occupants		36,014
Nonoccupants	8,641	

Rates

Licensed Drivers per Person	0.66
Registered Vehicles per Person	0.72
VMT per Registered Vehicle	9,732
Fatal Accidents per 100 million VMT	2.30
Fatalities per 100 million VMT	2.58
Involved Vehicles per Fatal Accident	1.45
Fatalities per Fatal Accident	1.12
Occupants per Fatal Accident	2.39
Fatalities per 1,000 Population	0.18

*Source: U.S. Bureau of Census, July 1983 estimates and Federal Highway Administration.

Foreword

The Fatal Accident Reporting System (FARS) gathers data on the most severe traffic accidents that occur each year--those that result in loss of human life. It supplies the U.S. Department of Transportation's National Highway Traffic Safety Administration (NHTSA) with information that is invaluable to its mission of reducing the number of traffic accidents and the losses that result from them. These data are essential to NHTSA's programs to identify traffic safety problems, to develop and implement better ways of dealing with those problems, and to evaluate existing and proposed highway and motor vehicle safety standards and programs.

FARS is operated and maintained by NHTSA's National Center for Statistics and Analysis (NCSA). FARS data are gathered on motor vehicle accidents that:

- Occurred on a roadway customarily open to the public;
- Resulted in the death of a person within 30 days of the accident;*
- Were not the result of natural disasters such as earthquakes, floods or torrential rains.

Other definitions used in FARS are contained in the Glossary.

FARS data are collected by each State under contractual agreements with NHTSA. The contracts are managed by Regional Contract Technical Managers in 10 NHTSA regions.

State employees gather, interpret, codify and transmit data on all fatal accidents to NHTSA. The number of analysts in each State depends on the number of fatal accidents that are expected to occur in the State based on previous years' records. Sources of data may include:

- Police Accident Reports
- State Vehicle Registration Files
- State Driver Licensing Files
- State Highway Department Files
- Vital Statistics Documents
- Death Certificates
- Coroner/Medical Examiner Reports
- Hospital Medical Reports
- Emergency Medical Services Reports

As the state analysts enter data into NHTSA'S computerized central data file, the data are automatically checked on-line for range and consistency as part of FARS quality control.

Range checks ensure that the codes submitted are valid. For example, a code of "4" for the element "Sex" would be rejected by the system since the only valid codes are "1" for "Male," "2" for "Female," and "9" for "Unknown."

Consistency checks ensure that no inconsistent data are entered. For example, if an analyst codes 11:00 a.m. as the time of the accident and "dusk" as the light condition, both values would be rejected because they are inconsistent.

Errors are displayed on the analyst's terminal as data are entered, enabling the analyst to make corrections immediately.

FARS data are also checked for timeliness, completeness, and accuracy. Timeliness is monitored by FARS headquarter's staff and by the 10 Regional Contract Technical Managers. The data submitted by each State is updated and reviewed weekly. Similarly, several programs continually monitor and improve the completeness and accuracy of the data.

The system contains descriptions, in a standard format, of each fatal accident reported. The format allows coding of approximately 90 different data elements to characterize each accident and the vehicles and persons involved in it. A few data elements may be added, dropped or modified each year to reflect changing user needs, vehicle designs, and areas of highway safety emphasis. Data are reported on three forms:

The Accident Level Form includes information on the time and location of the accident, the first harmful event, whether it was a "hit and run" accident, whether a school bus was involved, the number of vehicles and people involved, and weather conditions.

*FARS data include only those accidents which result in a death within 30 days. DOT adopted the 30-day requirement to expedite its data and because studies show that more than 98 percent of all motor vehicle related fatalities occur within 30 days of the accident. Most other countries use the 30-day reporting period.

The Vehicle/Driver Level Form includes data on vehicle type and its role in the accident, initial and principal impact points, the most harmful event, and the driving record and license status of each driver.

The Person Level Form provides details that include age and sex; whether the person was a driver, passenger, pedestrian, pedalcyclist or other non-occupant; alcohol involvement; injury severity, etc.

The forms used for reporting 1983 accidents are in Appendix A.

NHTSA's National Center for Statistics and Analysis (NCSA) each year responds to more than 3,000 requests for FARS information and distributes almost 60 computer tapes of data. Requests for information come from the Congress, Federal agencies, State and local governments, research organizations, insurance companies, automobile manufacturers, private citizens and the media.

The data are available for each year since 1975 when FARS began operation. The data are available in three ways:

- Computer tapes can be purchased and processed on the user's own computer system. The cost is $150. A sample order blank is in Appendix B.
- Modest requests for specific data will be answered by NCSA at no charge. Response usually requires about 2 weeks, depending on the nature and complexity of the data requested.
- An account can be established with NCSA's computer contractor. Costs include computer time charges.

FARS fully conforms with the requirements of the Privacy Act by omitting all personal identifying information such as names, addresses, or social security numbers.

While this report presents a wide spectrum of information in many different combinations, it contains only a small fraction of the potential uses of the data and only suggests the scope of analyses that can be performed using them. The report is not intended to be a comprehensive presentation. **Statements about the data in this text are not based on statistical analyses.**

Four further caveats should be kept in mind while reading this report. First, percentages shown, for the most part, have been rounded to the nearest 1/10 of 1 percent. As a result, they may not total exactly 100 percent. In figures and tables that show percentages, the base number upon which these percentages are computed is either explained on the figure or indicated by "100 percent" adjacent to the base number in the tables.

Second, most tables and figures include a number in parentheses under the title. This number is the population of the primary subject of the figure or table. The primary subject will usually be total fatalities, total fatal accidents, or some subset of either of these two. Subset populations, when used for the first time, are defined in the accompanying text.

Third, the State records, from which FARS data are collected, vary in content and level of detail from State to State. Also, availability of certain FARS data elements vary among jurisdictions. Because of this, it is not always possible for a State analyst to uniquely identify an attribute of a data element. In this event, the analyst uses the code "unknown" for the particular data element. "Unknown" data are included in this report to provide complete and unbiased information.

Most of the information in this report comes directly from the FARS files themselves. Detailed exposure information -- vehicle miles travelled under particular circumstances or numbers of licensed drivers and registered vehicles -- is generally not included or used. Thus, there is little rate information such as the per capita rate of fatalities by age group, or the rate of accident involvement for different classes of vehicles. The significance of some of the data presented in this report may not be obvious until such exposure based rates are calculated.

These data concern **only** fatal accidents. The National Accident Sampling System (NASS) is the complementary data base on all police reported accidents, including those which resulted in nonfatal injury and/or property damage. Data on nonfatal accidents are an important element in accident analysis programs.

To conform with other national data gathering systems, fatal accidents that occurred in Puerto Rico are not included in U.S. totals. Data from Puerto Rico are reported separately in Chapter IV.

For additional information concerning the 1983 FARS report, contact the National Center for Statistics and Analysis, National Highway Traffic Safety Administration, NRD-31, 400 Seventh Street, S.W., Washington, D. C. 20590, or telephone (202) 472-7040 or 426-4844.

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I. Fatality Reduction 1980-1983

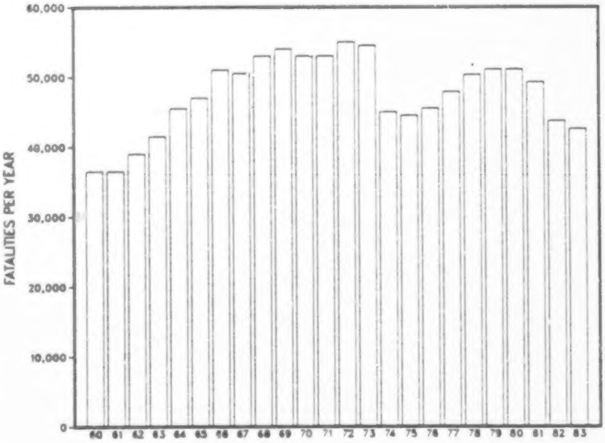
In 1983, traffic fatalities in the United States continued their 3-year decline, dropping from 43,945 in 1982 to 42,584 in 1983--a 3.1 percent drop. This is the lowest number of traffic fatalities since 1963. Since 1980, when 51,091 people died in traffic accidents, traffic fatalities have dropped dramatically by one sixth.

The decrease in fatalities occurred despite increases in vehicle travel. The estimated 1983 fatality rate of 2.58 fatalities per 100 million vehicle miles of travel is the lowest ever recorded, and is 24 percent lower than the 3.38 rate observed in 1980. Similarly, fatalities per 100,000 population dropped from 2.2 in 1980 to 1.8 in 1983.

FATALITY TRENDS

The number of fatalities per year rose steadily from 1961 to 1966, and increased at a lower rate through 1973. In 1974, with the fuel crisis and imposition of the national 55 mph speed limit, fatalities were dramatically lower, and remained almost constant during 1975 and 1976. They increased again over the next two years, and remained constant during 1979 and 1980. The latest decline, which began early in 1981, brought traffic fatalities for 1983 to the lowest annual total in the last 20 years. The 16.7 percent decrease from 1980 to 1983 occurred despite increases in the number of drivers, vehicles, and miles of travel (Figure I-1).

FIGURE I-1
U.S. TRAFFIC FATALITIES BY YEAR
1960-1983



The fatality rate per vehicle mile of travel increased slightly from 1960 to 1966, declined significantly during the next decade, leveled off between 1976 and 1980, and declined sharply during the last three years. The rate for 1983 was the lowest ever recorded (Figure I-2).

Single vehicle accidents dropped more than all other accidents from 1980 to 1983, nonoccupant accidents dropped less and multi-vehicle accidents showed the smallest decline (Table I-1).

DEMOGRAPHIC FACTORS

Younger driver fatalities dropped more than older driver fatalities. This is due, in part, to an 8 percent drop in the population of 15-20 year olds. Nighttime and single vehicle fatalities went down more than daytime and multi-vehicle fatalities. Since single vehicle accidents are more prevalent at night and with younger drivers, it is possible that the reduction in this type of accident reflected the reduction in the number of younger drivers at risk.

Vehicle occupant fatalities dropped slightly more than nonoccupant fatalities between 1980 and 1983 (Table I-2).

FIGURE I-2
U.S. TRAFFIC FATALITY RATE BY YEAR
1960-1983

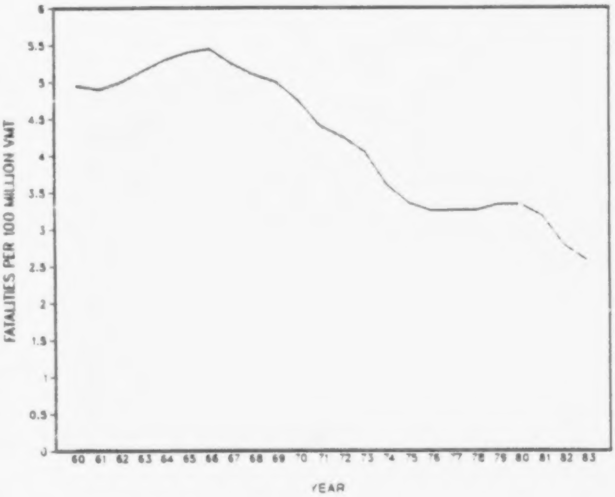


TABLE I-1
FATAL TRAFFIC ACCIDENTS BY TYPE
1980-1983

Accident Type	1980	1983	Percent Change
Nonoccupant	9,100	7,730	-15.1
Single Vehicle	19,591	15,784	-19.4
Multi-Vehicle	16,593	14,457	-12.9
Total	**45,284**	**37,971**	**-16.1**

TABLE I-2
TRAFFIC FATALITIES BY PERSON ROLE
1980-1983

Person Role	1980	1983	Percent Change
Occupant	41,927	34,840	-16.9
Nonoccupant	9,164	7,744	-15.5
Total	**51,091**	**42,584**	**-16.7**

Nonoccupant fatality reductions differed considerably by age, with most of the reduction from 1980 concentrated in people younger than 20 or over 44. The largest reductions in driver fatalities and in passenger fatalities were for occupants under 25 (Table I-3).

Some of the fatality changes by age can be attributed to population changes. While the total United States population increased by almost 3 percent from 1980 to 1983, population shifts among age groups varied widely. The number of young people (aged 15-20) dropped 8.1 percent, while people aged 35-44 increased by almost 14 percent (Table I-4). All else being equal, the number of fatalities would be expected to change by the same percent.

TABLE I-3
TRAFFIC FATALITIES BY AGE AND PERSON ROLE
1980-1983

	Under 15	15 to 17	18 to 20	21 to 24	25 to 34	35 to 44	45 to 54	55 to 64	Over 64	Total
Drivers										
1980	170	1,750	4,071	4,901	7,367	3,482	2,609	2,104	2,323	28,816
1983	133	1,192	3,060	3,873	6,331	3,257	2,061	1,793	2,406	24,135
% Change	-21.8	-31.9	-24.8	-21.0	-14.6	-6.5	-21.0	-14.8	+3.6	-16.2
Other Occupants										
1980	1,725	1,774	2,212	1,881	1,922	867	692	688	1,241	13,111
1983	1,457	1,203	1,614	1,484	1,653	801	573	622	1,245	10,705
% Change	-15.5	-32.2	-27.0	-21.1	-14.0	-7.6	-17.2	-9.6	+0.3	-18.3
Nonoccupants										
1980	1,852	487	644	739	1,187	723	772	802	1,777	9,164
1983	1,496	353	492	663	1,171	719	626	690	1,425	7,744
% Change	-19.2	-27.5	-23.6	-14.3	-1.3	-0.5	-18.9	-14.0	-19.8	-15.5
Total										
1980	**3,747**	**4,011**	**6,927**	**7,521**	**10,476**	**5,072**	**4,073**	**3,594**	**5,341**	**51,091**
1983	**3,086**	**2,748**	**5,166**	**6,020**	**9,155**	**4,777**	**3,260**	**3,105**	**5,076**	**42,584**
% Change	**-17.6**	**-31.5**	**-25.4**	**-20.0**	**-12.6**	**-5.8**	**-20.0**	**-13.6**	**-5.0**	**-16.7**

Note: For 1980, 329 Fatalities of Unknown Age are Included in the Total Column.

For 1983, 191 Fatalities of Unknown Age are Included in the Total Column.

TABLE I-4
ESTIMATES OF POPULATION BY AGE AND SEX
1980-1983

	Under 15	15 to 17	18 to 20	21 to 24	25 to 34	35 to 44	45 to 54	55 to 64	Over 64	Total
Male										
1980	26,217	6,329	6,585	8,524	18,567	12,669	10,980	10,175	10,367	110,413
1983	26,386	5,606	6,294	8,799	19,984	14,464	10,810	10,379	10,992	113,714
% Change	+0.6	-11.4	-4.4	+3.2	+7.6	+14.2	-1.5	+2.0	+6.0	+3.0
Female										
1980	25,071	6,064	6,478	8,514	18,859	13,155	11,752	11,584	15,346	116,823
1983	25,202	5,381	6,101	8,704	20,162	14,959	11,526	11,840	16,392	120,267
% Change	+0.5	-11.3	-5.8	+2.2	+6.9	+13.7	-1.9	+2.2	+6.8	+2.9
Total										
1980	**51,288**	**12,393**	**13,063**	**17,038**	**37,426**	**25,824**	**22,732**	**21,759**	**25,713**	**227,236**
1983	**51,588**	**10,987**	**12,395**	**17,503**	**40,146**	**29,423**	**22,336**	**22,219**	**27,384**	**233,981**
% Change	**+0.6**	**-11.3**	**-5.1**	**+2.7**	**+7.3**	**+13.9**	**-1.7**	**+2.1**	**+6.5**	**+3.0**

Source: U.S. Bureau of Census

Thus, for young people approximately 8.1 percent of their observed 27.6 percent fatality drop was due to population changes, and the remaining 19.5 percent is the per capita decrease. Similarly, since those aged 35-44 increased by 13.9 percent, their fatalities might be expected to increase by the same amount if nothing else changed. The adjusted 19.7 percent drop is obtained by subtracting the 13.9 percent population growth from the observed 5.8 percent fatality drop. The adjusted figures show much less variation than the unadjusted figures, though young people still have the greatest decrease and those over 64 the smallest (Table I-5).

When viewed against their proportion of the population, fatalities rose slightly for those under 15, decreased for those 15 to 20 and increased by about 5 percent for those over 20 (Figure I-3).

FIGURE I-3
CHANGES IN TRAFFIC FATALITIES AND FATALITIES PER 100 MILLION POPULATION BY AGE
1980-1983

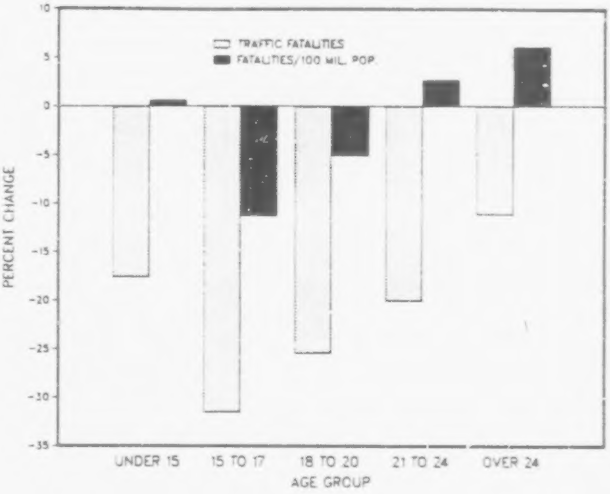


TABLE I-5
TRAFFIC FATALITIES BY AGE AND SEX
1980-1983

	Under 15	15 to 17	18 to 20	21 to 24	25 to 34	35 to 44	45 to 54	55 to 64	Over 64	Total
Male										
1980	2,331	2,729	5,430	5,980	8,283	3,781	2,921	2,447	3,266	37,392
1983	1,934	1,884	3,901	4,714	7,095	3,502	2,300	2,035	2,991	30,495
% Change	-17.0	-31.0	-28.2	-21.2	-14.3	-7.4	-21.3	-17.6	-8.4	-18.4
Adj. Change	-17.6	-19.6	-23.8	-24.4	-21.9	-21.5	-19.8	-19.6	-14.4	-21.4
Female										
1980	1,415	1,281	1,496	1,539	2,193	1,291	1,152	1,147	2,075	13,689
1983	1,152	864	1,264	1,306	2,060	1,275	960	1,070	2,085	12,083
% Change	-18.6	-32.6	-15.5	-15.1	-6.1	-1.2	-16.7	-6.7	+0.5	-11.7
Adj. Change	-19.1	-21.3	-9.7	-17.3	-13.0	-14.9	-14.8	-8.9	-6.3	-14.6
Total										
1980	**3,747**	**4,011**	**6,927**	**7,521**	**10,476**	**5,072**	**4,073**	**3,594**	**5,341**	**51,091**
1983	**3,086**	**2,748**	**5,166**	**6,020**	**9,155**	**4,777**	**3,260**	**3,105**	**5,076**	**42,584**
% Change	**-17.6**	**-31.5**	**-25.4**	**-20.0**	**-12.6**	**-5.8**	**-20.0**	**-13.6**	**-5.0**	**-16.7**
Adj. Change	**-18.2**	**-20.2**	**-20.3**	**-22.7**	**-19.9**	**-19.7**	**-18.3**	**-15.7**	**-11.5**	**-19.7**

Note: For 1980, 324 Fatalities of Unknown Age and 10 of Unknown Sex are included in the Total Column.

For 1983, 186 Fatalities of Unknown Age and 6 of Unknown Sex are included in the Total Column.

SEX

Male drivers were involved in substantially fewer fatal accidents in 1983 than in 1980. However, female driver involvement dropped only slightly (Table I-6). The decrease in male fatalities, when adjusted for changes in the population, ranged from a 24.4 percent drop for the 21 to 24 age group to only a 17.6 percent drop for those under 15. The greatest drop for females occurred in the 15-17 age group (down 21.3 percent), while women 65 years and older had a decrease of only 6.3 percent (Table I-5).

TABLE I-6
INVOLVED DRIVERS BY AGE AND SEX
1980-1983

	Under 15	15 to 17	18 to 20	21 to 24	25 to 34	35 to 44	45 to 54	55 to 64	Over 64	Total
Male										
1980	213	3,113	7,595	8,887	13,734	6,740	4,706	3,419	2,938	51,463
1983	163	2,131	5,348	6,869	11,858	6,372	3,977	2,946	2,988	42,807
% Change	-23.5	-31.5	-29.6	-22.7	-13.7	-5.5	-15.5	-13.8	+1.7	-16.8
Female										
1980	27	872	1,467	1,686	2,773	1,625	1,206	920	875	11,466
1983	40	708	1,358	1,563	2,611	1,694	1,013	916	1,038	10,957
% Change	+48.1	-18.8	-7.4	-7.3	-5.8	+4.2	-16.0	-0.4	+18.6	-4.4
Total										
1980	**240**	**3,986**	**9,062**	**10,574**	**16,507**	**8,366**	**5,912**	**4,339**	**3,813**	**62,957**
1983	**203**	**2,839**	**6,787**	**8,432**	**14,469**	**8,066**	**4,990**	**3,862**	**4,026**	**54,649**
% Change	**-15.4**	**-28.8**	**-26.0**	**-20.3**	**-12.3**	**-3.6**	**-15.6**	**-11.0**	**-5.6**	**-13.2**

Note: For 1980, 133 Involved Drivers of Unknown Age and 28 of Unknown Sex are Included in the Total Column.

For 1983, 171 Involved Drivers of Unknown Age and 885 of Unknown Sex are Included in the Total Column. These include Drivers of Hit and Run Accidents. Prior to 1982, Hit and Run Drivers were coded as "Unknown if there was a Driver", and no Driver-Related Variables were coded.

VEHICLE OCCUPANT FATALITIES

From 1980 to 1983, vehicle registrations overall rose almost 5 percent. Although motorcycle registrations dropped 2.4 percent, there were no major shifts in the types of vehicles that were registered. For each vehicle type, fatalities per registered vehicle fell over 15 percent from 1980 to 1983 (Table I-7).

The most striking change occurred in passenger car fatalities. Deaths in subcompact cars increased almost 8 percent and large car occupant fatalities decreased by almost 40 percent (Table I-8 and Figure I-4). Vehicle registration changes in passenger cars by size may account for a small portion of this difference.

TABLE I-7
OCCUPANT FATALITIES, REGISTERED VEHICLES AND ACCIDENT INVOLVED VEHICLES BY VEHICLE TYPE
1980-1983

	Passenger Cars	Motor-cycles	Trucks & Buses	Other & Unknown	Total
Occupant Fatalities					
1980	27,414	5,153	8,796	564	41,927
1983	22,975	4,264	6,404	1,197*	34,840
% Change	-16.2	-17.3	-27.2		-16.9
Involved Vehicles					
1980	39,020	5,194	18,389	882	63,485
1983	33,288	4,301	15,014	2,496*	55,099
% Change	-14.7	-17.2	-18.4		-13.2
Registered Vehicles (000)[1]					
1980	121,724	5,725	34,166		161,615
1983	126,728	5,585	37,133		169,446
% Change	+4.1	-2.4	+8.7		+4.8

*In 1983 all vehicle level variables were coded as unknown for hit and run accidents where the driver or vehicle was never apprehended. Prior to 1982, there were no vehicle level variables coded for hit and run vehicles.

[1] Source: Federal Highway Administration, Highway Statistics Division.

TABLE I-8
OCCUPANT FATALITIES BY VEHICLE TYPE
1980-1983

		1980	1983	Percent Change
Passenger Car Wheelbases:		27,449	22,975	-16.3
Small Subcompact	- Under 96 Inches	4,994	4,912	-1.6
Subcompact	- 96 - 101 Inches	2,506	2,705	+7.9
Compact	- 102 - 111 Inches	6,292	5,614	-10.8
Intermediate	- 112 - 120 Inches	6,260	4,548	-27.3
Full Size	- Over 120 Inches	3,454	2,083	-39.7
Other		3,943	3,113	-21.0
Motorcycles		5,144	4,264	-17.1
Light Trucks		6,566	5,379	-18.1
Medium Trucks		285	166	-41.8
Heavy Trucks		976	806	-17.4
Buses		46	53	+15.2
Special Vehicles		1,152	1,060	-8.0
Unknown		309	137	
Total		**41,927**	**34,840**	**-16.9**

FIGURE I-4
CHANGES IN PASSENGER CAR VEHICLE OCCUPANT FATALITIES BY VEHICLE SIZE
1980-1983

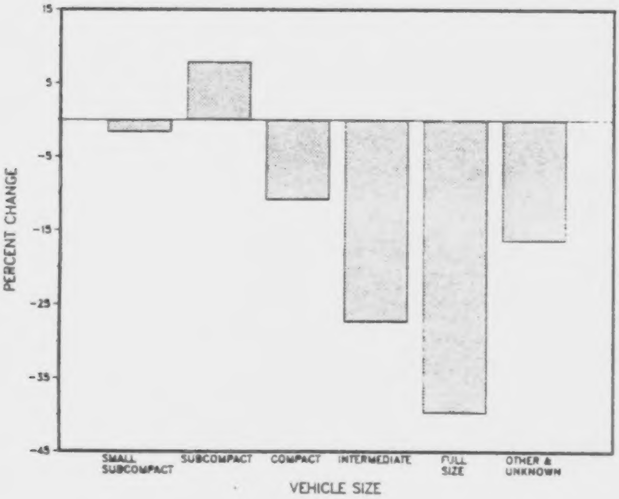


TABLE I-9
NUMBER OF VEHICLES IN FATAL ACCIDENTS BY TYPE
1980-1983

	1980	1983	Percent Change
Passenger Cars	39,059	33,288	-14.8
Small Subcompact	5,742	5,837	+1.7
Subcompact	2,996	3,438	+14.8
Compact	8,560	7,927	-7.4
Intermediate	10,126	7,621	-24.7
Full Size	6,287	3,909	-37.8
Other	5,348	4,556	-14.8
Motorcycles	5,194	4,301	-17.2
Light Trucks	11,477	9,870	-14.0
Medium Trucks	1,092	664	-39.2
Heavy Trucks	4,284	4,174	-2.3
Buses	330	306	-7.3
Special Vehicles	1,555	1,523	-2.1
Unknown	494	973	
Total	63,485	55,099	-13.2

From 1980 to 1983, heavy truck occupant fatalities dropped 17.3 percent. However, fatalities in accidents involving large trucks dropped only 1.8 percent. The decreases in large truck occupant fatalities were largely off-set by a 2.2 percent increase in deaths of people in other vehicles that were involved in collisions with large trucks, and an increase in large truck-related non-occupant deaths of 2.1 percent (Table I-10).

The passenger car occupant fatality reduction was considerably larger for single vehicle accidents (21.7 percent) than for those involving two or more vehicles (11.1 percent). Differences also exist among the various multi-vehicle accident types: head-on accidents show a larger reduction (13.7 percent) than the remaining types (Table I-11).

TABLE I-10
TRAFFIC FATALITIES INVOLVING LARGE TRUCKS*
1980-1983

	Large Truck Occupants				
	Single Vehicle Accidents	Multi-Vehicle Accidents	Other Vehicle Occupants	Non-Occupants	Total
1980	671	305	3,379	466	4,821
1983	545	262	3,452	476	4,735
% Change	-18.8	-14.1	+2.2	+2.1	-1.8

* Trucks of 26,000 lbs. Gross Vehicle Weight or more.

TABLE I-11
PASSENGER CAR OCCUPANT FATALITIES BY VEHICLE SIZE AND ACCIDENT TYPE
1980-1983

	Multi-vehicle Accidents							
	Rear End	Head On	Angle	Side Swipe	Other & Unknown	Sub-Total	Single Vehicle Accidents	Total
Small Subcompact								
1980	311	1,350	995	99	103	2,858	2,136	4,994
1983	321	1,380	993	118	91	2,903	2,009	4,912
% Change	+3.2	+2.2	-0.2	+19.2	-11.7	+1.6	-5.9	-1.6
Subcompact								
1980	113	622	467	51	43	1,296	1,210	2,506
1983	136	684	512	50	49	1,431	1,274	2,705
% Change	+20.4	+10.0	+9.6	-2.0	+14.0	+10.4	+5.3	+7.9
Compact								
1980	296	1,427	1,207	129	99	3,158	3,134	6,292
1983	314	1,319	1,279	117	99	3,128	2,486	5,614
% Change	+6.1	-7.6	+6.0	-9.3	+0.0	-0.9	-20.7	-10.8
Intermediate								
1980	241	1,451	1,167	101	92	3,052	3,208	6,260
1983	213	983	929	76	69	2,270	2,278	4,548
% Change	-11.6	-32.3	-20.4	-24.8	-24.2	-25.6	-29.0	-27.3
Full Size								
1980	157	670	685	58	45	1,615	1,839	3,454
1983	81	439	451	33	32	1,036	1,047	2,083
% Change	-48.4	-34.5	-34.2	-43.1	-28.9	-35.9	-43.1	-39.7
Other & Unknown								
1980	191	819	782	62	81	1,935	2,008	3,943
1983	154	667	675	52	56	1,604	1,509	3,113
Total								
1980	**1,309**	**6,339**	**5,303**	**500**	**463**	**13,914**	**13,535**	**27,449**
1983	**1,219**	**5,472**	**4,839**	**446**	**396**	**12,372**	**10,603**	**22,975**
% Change	**-6.9**	**-13.7**	**-8.7**	**-10.8**	**-14.5**	**-11.1**	**-21.7**	**-16.3**

Most of the reduction occurred in larger cars, for both accident types. This reduction, and the simultaneous rise in small car occupant fatalities, may reflect a shift in the vehicle population away from larger automobiles toward subcompact and small subcompact cars. In collisions with other vehicles, fatalities among occupants of subcompact and smaller cars increased 4.3 percent. This was offset by large decreases in intermediate and large car occupant fatalities in multi-vehicle crashes. However, the decrease in single vehicle accidents was even stronger, driven by large decreases in compact and larger car fatalities in such accidents.

LOCATION

The reduction of fatalities from 1980 to 1983 in urban areas was slightly greater than in rural areas (16.4 vs. 15.9 percent, Table I-12). The reduction in multi-vehicle accident occupant fatalities was also slightly greater in urban areas than in rural areas (13.5 vs. 13 percent, Table I-13). The difference in occupant fatalities between urban and rural areas was also small for single-vehicle accidents (20.7 vs. 18.7 percent, Table I-14) and in nonoccupant fatalities (14.7 vs 14.5 percent, Table I-15) The reduction was not uniform on all types of highways. Interstate highways, which are generally the safest, experienced the smallest reduction, followed by non Federal-Aid highways, Federal-Aid Primary and Federal-Aid Urban Arterial highways, and Federal-Aid Secondary and Federal-Aid Urban Collector highways in that order. The greatest reduction occurred where the posted speed limit was between 5 and 25 mph (19.9 percent). The reduction on highways with a 55 mph posted speed was only 9 percent (Table I-17).

TABLE I-12
FATALITIES BY ROAD TYPE AND LAND USE
1980-1983

	Urban	Rural	Total
Interstate			
1980	2,066	2,317	4,383
1983	1,878	2,151	4,029
% Change	-9.1	-7.2	-8.0
Other Federal-Aid Primary			
1980	11,767	11,911	23,678
1983	10,356	9,995	20,351
% Change	-12.0	-16.1	-14.1
Federal-Aid Secondary			
1980	1,869	7,361	9,230
1983	1,361	6,016	7,377
% Change	-27.2	-18.3	-20.1
Non Federal-Aid			
1980	5,409	6,697	12,106
1983	4,398	6,235	10,633
% Change	-18.7	-6.9	-12.2
Unknown			
1980	449	828	1,277
1983	32	89	121
Total			
1980	**21,560**	**29,114**	**51,091**
1983	**18,025**	**24,486**	**42,584**
% Change	**-16.4**	**-15.9**	**-16.7**

Note: 1980 Total Includes 417 Fatalities with Unknown Land Use.
1983 Total Includes 73 Fatalities with Unknown Land Use.
Percent Change of the Total is greater than
both Urban and Rural due to Unknown Land Use.

For Tables I-12 through I-16:
Other Federal-Aid Primary includes Federal-Aid Urban Arterials.
Federal-Aid Secondary includes Federal-Aid Urban Collectors.

TABLE I-13
OCCUPANT FATALITIES IN MULTI-VEHICLE ACCIDENTS BY ROAD TYPE AND LAND USE
1980-1983

		Urban	Rural	Total
Interstate	1980	720	816	1,536
	1983	709	832	1,541
	% Change	-1.5	2.0	0.3
Other Federal-Aid Primary	1980	5,023	6,331	11,354
	1983	4,640	5,531	10,171
	% Change	-7.6	-12.6	-10.4
Federal-Aid Secondary	1980	731	2,832	3,563
	1983	452	2,395	2,847
	% Change	-38.2	-15.4	-20.1
Non Federal-Aid	1980	1,596	1,619	3,215
	1983	1,301	1,608	2,909
	% Change	-18.5	-0.7	-9.5
Unknown	1980	153	355	508
	1983	10	30	40
Total	**1980**	**8,223**	**11,953**	**20,287**
	1983	**7,112**	**10,396**	**17,545**
	% Change	**-13.5**	**-13.0**	**-13.5**

Note: 1980 Total Includes 111 Occupant Fatalities with Unknown Land Use.
1983 Total Includes 37 Occupant Fatailties with Unknown Land Use.

TABLE I-14
OCCUPANT FATALITIES IN SINGLE VEHICLE ACCIDENTS BY ROAD TYPE AND LAND USE
1980-1983

		Urban	Rural	Total
Interstate	1980	883	1,218	2,101
	1983	761	1,043	1,804
	% Change	-13.8	-14.4	-14.1
Other Federal-Aid Primary	1980	3,427	4,374	7,801
	1983	2,782	3,315	6,097
	% Change	-18.8	-24.4	-21.8
Federal-Aid Secondary	1980	719	3,738	4,457
	1983	531	3,036	3,567
	% Change	-26.1	-18.9	-20.0
Non Federal-Aid	1980	2,226	4,268	6,494
	1983	1,797	3,949	5,746
	% Change	-19.3	-7.5	-11.5
Unknown	1980	183	403	586
	1983	12	45	57
Total	**1980**	**7,438**	**14,001**	**21,640**
	1983	**5,883**	**11,388**	**17,295**
	% Change	**-20.9**	**-18.7**	**-20.1**

Note: 1980 Total Includes 201 Occupant Fatalities with Unknown Land Use.
1983 Total Includes 24 Occupant Fatalities with Unknown Land Use.

TABLE I-15
NONOCCUPANT FATALITIES BY ROAD TYPE AND LAND USE
1980-1983

		Urban	Rural	Total
Interstate	1980	463	283	746
	1983	408	276	684
	% Change	-11.9	-2.5	-8.3
Other Federal-Aid Primary	1980	3,317	1,206	4,523
	1983	2,934	1,149	4,083
	% Change	-11.5	-4.7	-9.7
Federal-Aid Secondary	1980	419	791	1,210
	1983	378	585	963
	% Change	-9.8	-26.0	-20.4
Non Federal-Aid	1980	1,587	810	2,397
	1983	1,300	678	1,978
	% Change	-18.1	-16.3	-16.9
Unknown	1980	113	70	183
	1983	10	14	24
Total	**1980**	**5,899**	**3,160**	**9,164**
	1983	**5,030**	**2,702**	**7,744**
	% Change	**-14.7**	**-14.5**	**-15.5**

Note: 1980 Total Includes 105 Fatalities with Unknown Land Use.
1983 Total Includes 12 Fatalities with Unknown Land Use.
Percent Change of the Total is greater than
both Urban and Rural due to Unknown Land Use.

TABLE I-16
FATALITIES BY PERSON'S ROLE AND ROAD TYPE
1980-1983

			Occupants		
		Nonoccupants	Single Vehicle Accidents	Multi-Vehicle Accidents	Total
Interstate	1980	746	2,101	1,536	4,383
	1983	685	1,806	1,542	4,033
	% Change	-8.2	-14.0	0.4	-8.0
Other Federal-Aid Primary	1980	4,523	7,801	11,355	23,679
	1983	4,083	6,097	10,176	20,356
	% Change	-9.7	-21.8	-10.4	-14.0
Federal-Aid Secondary	1980	1,210	4,457	3,563	9,230
	1983	963	3,567	2,847	7,377
	% Change	-20.4	-20.0	-20.1	-20.1
Non Federal-Aid	1980	2,494	6,678	3,313	12,485
	1983	1,979	5,746	2,909	10,634
	% Change	-20.6	-14.0	-12.2	-14.8
Unknown	1980	191	603	520	1,314
	1983	34	79	71	184
Total	**1980**	**9,164**	**21,640**	**20,287**	**51,091**
	1983	**7,744**	**17,295**	**17,545**	**42,584**
	% Change	**-15.5**	**-20.1**	**-13.5**	**-16.7**

TABLE I-17
FATAL ACCIDENTS BY TYPE AND POSTED SPEED LIMIT
1980-1983

		5 to 25	30 to 35	40 to 45	50	55	Unknown	Total
Nonuccupant	1980	. 943	2,410	1,162	361	2,079	1,051	8,171
	1983	782	2,417	1,423	345	2,361	402	7,730
	% Change	-17.1	+0.3	+22.5	-4.4	+13.6		-5.4
Single Vehicle	1980	1,246	3,347	2,321	1.039	9,985	2,043	19,981
	1983	1,000	2,742	1,994	757	8,599	692	15,784
	% Change	-19.7	-18.1	-14.1	-27.1	-13.9		-21.0
Rear End	1980	47	252	303	143	1,202	153	2,100
	1983	33	180	305	109	1,124	46	1,797
	% Change	-29.8	-28.6	+0.7	-23.8	-6.5		-14.4
Head On	1980	128	687	976	415	3,624		6,449
	1983	124	601	924	362	3,289	147	5.447
	% Change	-3.1	-12.5	-5.3	-12.8	-9.2		-15.5
Angle	1980	425	1,577	1,254	388	2,619	686	6,949
	1983	316	1,372	1,301	388	2,496	172	6,045
	% Change	-25.6	-13.0	+3.7	0.0	-4.7		-13.0
Other & Unknown	1980	76	236	227	89	843	136	1,638
	1983	39	181	182	82	650	34	1,168
Total	**1980**	**2,865**	**8,527**	**6,256**	**2,431**	**20,352**	**4,853**	**45,284**
	1983	**2,294**	**7,493**	**6,129**	**2,043**	**18,519**	**1,493**	**37,971**
	% Change	**-19.9**	**-12.1**	**-2.0**	**-16.0**	**-9.0**		**-16.1**

DAY AND TIME

With the exception of Saturday and Sunday, which had reductions of 18.8 percent and 20.2 percent respectively, the changes in fatal accidents between 1980 and 1983 vary only slightly among all other days of the week. However, changes by time of day show large differences (Table I-18). The reduction in fatalities between the three years ranges from 5.9 percent during the middle of the day to 24.1 percent during late night hours. Evening hours show an above average fatality reduction of 17.2 percent (Table I-19 and Figure I-5).

Further selected comparisons between 1983 and previous years are in Chapters III and IX.

TABLE I-18
FATAL ACCIDENTS BY DAY OF WEEK AND HOUR OF DAY
1980-1983

	10 p.m. to 2 a.m.	2 a.m. to 6 a.m.	6 a.m. to 10 a.m.	10 a.m. to 2 p.m.	2 p.m. to 6 p.m.	6 p.m. to 10 p.m.	Unknown	Total
Sunday								
1980	2,168	1,627	422	603	1,131	1,451	41	7,443
1983	1,503	1,215	405	541	968	1,243	65	5,940
% Change	-30.7	-25.3	-4.0	-10.2	-14.4	-14.3		-20.2
Monday								
1980	957	389	571	661	1,156	1,128	36	4,898
1983	772	361	517	579	988	963	24	4,204
% Change	-19.3	-7.2	-9.5	-12.4	-14.5	-14.6		-14.2
Tuesday								
1980	1,024	504	569	656	1,023	1,110	29	4,915
1983	824	382	513	672	992	952	15	4,350
% Change	-19.5	-24.2	-9.8	+2.4	-3.0	-14.2		-11.5
Wednesday								
1980	1,167	491	609	668	1,095	1,203	24	5,257
1983	879	385	562	608	983	1,022	22	4,461
% Change	-24.7	-21.6	-7.7	-9.0	-10.2	-15.0		-15.1
Thursday								
1980	1,346	612	560	694	1,146	1,254	35	5,647
1983	1,023	486	532	682	1,033	1,107	22	4,885
% Change	-24.0	-20.6	-5.0	-1.7	-9.9	-11.7		-13.5
Friday								
1980	2,061	749	599	742	1,341	1,944	26	7,462
1983	1,686	619	574	708	1,181	1,479	31	6,278
% Change	-18.2	-17.4	-4.2	-4.6	-11.9	-23.9		-15.9
Saturday								
1980	2,903	2,009	568	802	1,402	1,924	54	9,662
1983	2,240	1,543	538	711	1,150	1,608	55	7,845
% Change	-22.8	-23.2	-5.3	-11.3	-18.0	-16.4		-18.8
Total								
1980	**11,626**	**6,381**	**3,898**	**4,826**	**8,294**	**10,014**	**245**	**45,284**
1983	**8,927**	**4,991**	**3,641**	**4,501**	**7,295**	**8,374**	**234**	**37,971**
% Change	**-23.2**	**-21.8**	**-6.6**	**-6.7**	**-12.0**	**-16.4**		**-16.2**

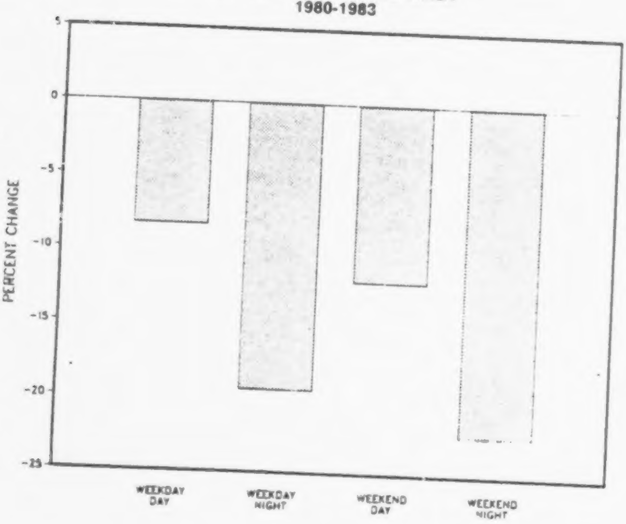
Note: 1983 Total Includes 8 Fatal Accidents with Unknown Day of Week.

TABLE I-19
FATALITIES BY DAY OF WEEK AND HOUR OF DAY
1980-1983

	10 p.m. to 2 a.m.	2 a.m. to 6 a.m.	6 a.m. to 10 a.m.	10 a.m. to 2 p.m.	2 p.m. to 6 p.m.	6 p.m. to 10 p.m.	Unknown	Total
Sunday								
1980	2,499	1,873	485	695	1,304	1,656	43	8,555
1983	1,712	1,351	464	627	1,122	1,462	75	6,813
% Change	-31.5	-27.9	-4.3	-9.8	-14.0	-11.7		-20.3
Monday								
1980	1,076	449	629	743	1,278	1,287	36	5,498
1983	862	397	568	641	1,102	1,061	25	4,656
% Change	-19.9	-11.6	-9.7	-13.7	-13.8	-17.6		-15.3
Tuesday								
1980	1,156	573	613	713	1,132	1,216	29	5,432
1983	895	425	551	733	1,089	1,053	15	4,761
% Change	-22.6	-25.8	-10.1	+2.8	-3.8	-13.4		-12.3
Wednesday								
1980	1,292	554	681	738	1,221	1,337	25	5,848
1983	990	440	626	671	1,098	1,108	22	4,955
% Change	-23.4	-20.6	-8.1	-9.1	-10.1	-17.2		-15.3
Thursday								
1980	1,539	663	622	770	1,271	1,400	39	6,304
1983	1,123	539	590	773	1,154	1,212	22	5,413
% Change	-27.0	-18.7	-5.1	+0.4	-9.2	-13.4		-14.1
Friday								
1980	2,311	842	667	819	1,555	2,193	28	8,415
1983	1,876	682	631	810	1,294	1,642	37	6,972
% Change	-18.8	-19.0	-5.4	-1.1	-16.8	-25.1		-17.1
Saturday								
1980	3,359	2,240	646	903	1,602	2,233	56	11,039
1983	2,578	1,783	608	809	1,331	1,835	61	9,005
% Change	-23.3	-20.4	-5.9	-10.4	-16.9	-17.8		-18.4
Total								
1980	**13,232**	**7,194**	**3,343**	**5,381**	**9,363**	**11,322**	**256**	**51,091**
1983	**10,036**	**5,617**	**4,038**	**5,064**	**8,190**	**9,373**	**257**	**42,584**
% Change	**-24.1**	**-21.9**	**-7.0**	**-5.9**	**-12.5**	**-17.2**		**-16.7**

Note: 1983 Total Includes 9 Fatalities with Unknown Day of Week.

FIGURE I-5
CHANGES IN TRAFFIC FATALITIES
BY TIME OF DAY AND WEEK
1980-1983



* "Weekday" - 6 a.m. Monday through 5:59 p.m. Friday.
"Weekend" - 6 p.m. Friday through 5:59 a.m. Monday.
"Day" - 6 a.m. through 5:59 p.m.
"Night" - 6 p.m. through 5:59 a.m.

II. Alcohol and Safety Belts

The use of alcohol and failure to use safety belts are two major contributing factors to deaths from motor vehicle accidents. In 1983 alcohol was reported in 55 percent of the fatal accidents. This translates to approximately 23,500 fatalities. Only about 748 (3.3 percent) of all passenger car occupants who died were reported to have been wearing a restraint. Efforts to decrease drunken driving and to increase the use of safety belts and other occupant restraints are NHTSA priorities.

ALCOHOL

Drivers

During 1983, 46.2 percent of the fatally injured drivers in the 15 States with long-term complete testing on alcohol were at legally intoxicating blood alcohol levels.* An additional 10.4 percent were impaired or had some alcohol in their blood system at the time of their crash which means that almost three out of every five fatally injured drivers (56.6 percent) had been drinking (Table II-1).

TABLE II-1
ALCOHOL INVOLVEMENT IN DRIVER FATALITIES WITH KNOWN BLOOD ALCOHOL CONTENT
(15 States)
1980-1983

Blood Alcohol Content	1980	1983
None (0.00%)	38.5	43.4
Alcohol Involved	61.5	56.6
Some (0.01%-0.05%)	5.9	5.2
Impaired (0.06%-0.09%)	5.5	5.2
Intoxicated (0.10% or more)	50.1	46.2

---

*The data in this section are based on information gathered in fifteen states (California, Colorado, Delaware, District of Columbia, Hawaii, Nevada, New Hampshire, New Jersey, New Mexico, Oregon, Rhode Island, Vermont, Virginia, Washington and Wisconsin) that routinely test fatally injured drivers for the presence of alcohol. Legally intoxicating blood alcohol levels are 0.10 percent in most states.

Eighty to ninety percent of all fatally injured drivers in those states were tested. Generally, tests are not performed on drivers who died more than four hours after their accident, received blood transfusions or had other factors that would invalidate the results of tests to detect the presence or concentration of alcohol in their blood. The drivers tested and the states that routinely conduct those tests appear to provide an unbiased sample which can be used to make reasonably sound national estimates.

There are some indications that serious accidents associated with drunk driving may be decreasing. In 1980, the percent of fatally injured drivers in these 15 states who were legally intoxicated was 50.1 percent. While driver fatalities dropped about 16 percent between 1980 and 1983, the number of fatally injured drivers who were intoxicated in those states dropped about 23 percent in the same period.

People who were driving certain vehicles were more likely to have been drinking than people who were driving other vehicle types. For instance, when fatally injured drivers of medium trucks were tested, they were much less likely to have been drinking than fatally injured automobile drivers or motorcyclists (Table II-2). Fatally injured pedestrians who had been drinking had, on average, higher alcohol concentration in their blood than drivers who had been drinking.

TABLE II-2
ALCOHOL INVOLVEMENT BY VEHICLE BODY TYPES
1983

	Passenger Cars	Motor-cycles	Light Trucks	Medium Trucks	Heavy Trucks	Other Vehicles	Other Non-occupant	Pedes-trians	Pedal-cyclists	Total
Number of Accidents in which one or more Vehicles/Persons of this Type were Involved	26,695	4,203	9,324	657	3,960	2,766	174	6,752	844	45,284
Number of Fatally Injured Persons[1]	22,975	4,264	5,379	166	806	1,2[illegible]	81	6,824	839	42,584
14 and Under	1,080	124	279	10	22	[illegible]5	19	1,077	400	3,086
Over 14 Years Old	21,838	4,134	5,089	155	781	1,171	61	5,643	435	39,307
THE FOLLOWING IS BASED ON DATA FROM THE 15 STATES THAT ROUTINELY TEST FATALITIES										
Percent of Accidents with any Alcohol Involvement[2]	54.6	59.7	55.1	28.0	31.9	54.6	56.3	48.5	29.9	55.5
Percent of Tested Fatally Injured Drivers/Pedestrians[3]										
Alcohol Involved[4]	55.5	59.7	62.6	25.0	17.9	65.9	N/A	49.2	25.2	54.6
Impaired[5]	51.3	53.6	59.5	25.0	13.7	62.4	N/A	45.8	22.3	50.5
Intoxicated[6]	45.2	45.2	55.3	25.0	12.8	56.6	N/A	40.4	19.4	44.6

[1] 191 Persons with Unknown Age are included in these totals.
[2] Either a positive alcohol test result or an indication from police of any alcohol involvement.
[3] Pedestrians and pedalcyclists over fourteen only.
[4] Blood Alcohol Content at least 0.01%.
[5] Blood Alcohol Content at least 0.05%.
[6] Blood Alcohol Content at least 0.10%.

When nonoccupants were killed in fatal accidents, they were two times as likely to have been drinking than the involved drivers (Table II-3).

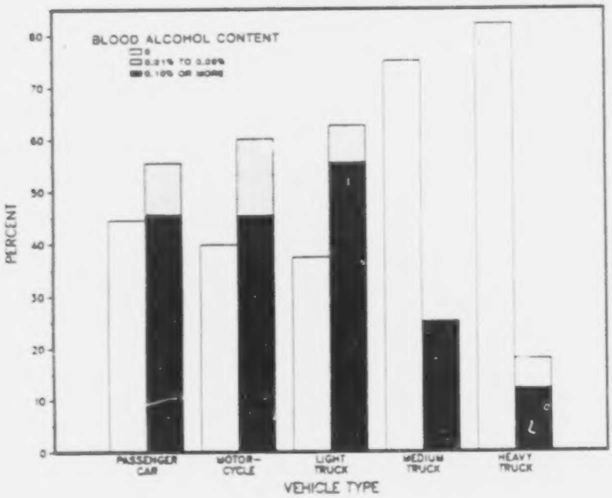
Fatally injured light truck drivers, on average, had been drinking more heavily than other fatally injured drivers (Figure II-1).

TABLE II-3
DRINKING INVOLVEMENT IN FATAL NONOCCUPANT* ACCIDENTS
(15 States)
1983

	Percent
No Alcohol Involvement	46.4
Some Alcohol Involvement	53.6
Nonoccupant Alcohol Involved	32.6
Driver Alcohol Involved	10.2
Both Alcohol Involved	10.8

* For Nonoccupants over 15 only.

FIGURE II-1
ALCOHOL TEST RESULTS OF FATALLY INJURED DRIVERS BY VEHICLE TYPE
(15 States)



The vast majority of fatally injured drivers, whether they had been drinking or not, held valid licenses. In 1980 drivers in fatal accidents which were reported to have alcohol involvement were almost twice as likely to have an invalid license than those involved in accidents where no presence of alcohol was reported. In 1983, drivers involved in accidents where alcohol was reported were more than twice as likely to have been driving without a valid license than those in accidents where alcohol was not involved. (Table II-4).

TABLE II-4
DRIVERS INVOLVED IN FATAL ACCIDENTS BY LICENSE STATUS AND ALCOHOL INVOLVEMENT
(All States)

	Not Alcohol Involved		Alcohol Involved	
	1980	1983	1980	1983
Invalid License	7.8	7.0	14.1	16.0
Valid License	90.5	88.9	83.9	82.0
Unknown	1.7	4.1	2.0	2.0
Total	100.0	100.0	100.0	100.0

Restraint Use

The presence of alcohol also was associated with a lower rate of safety belt use. Although few drivers who were involved in fatal accidents (5.2 percent) were wearing safety belts when they were sober, drivers who had been drinking were virtually never (1.6 percent) wearing safety belts. Between 1980 and 1983, the belt wearing rate among alcohol involved drivers in fatal crashes remained unchanged (1.6 percent), while the incidence of belt use among other drivers in fatal accidents increased from 3.8 percent to 5.2 percent (Table II-5).

TABLE II-5
RESTRAINT USAGE FOR ALCOHOL INVOLVED AND OTHER DRIVERS
(All States)

	Percent Restrained[1]	
	1980	1983
Alcohol Involved Drivers	1.6	1.6
Other Drivers[2]	3.8	5.2

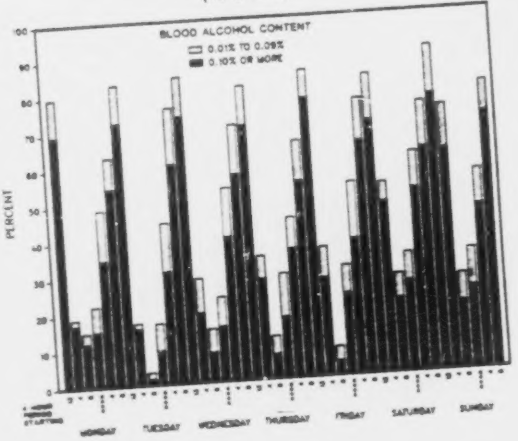
[1] Includes only drivers with known restraint usage. Unknown restraint usage varies by file, by year and by State. Unknowns were included in the not restrained group.

[2] Includes drivers of unknown alcohol involvement.

Day and Time

The pattern of alcohol involvement in fatal crashes was fairly consistent throughout the week. On any day of the week the lowest incidence of alcohol involvement was between dawn and noon. It then increased until it peaked during late night and early morning hours. Relatively few accidents that occurred between dawn and noon during the week involved alcohol. This changed on weekends when the incidence of alcohol involvement did not drop below 25 percent. Alcohol involvement is noticeably higher in the 4 a.m. to noon time period on weekends compared to weekdays. Although the greatest proportion of alcohol involvement among fatally injured drivers occurred in weekend accidents, the incidence of alcohol involvement varied only about ten percent in crashes that occurred during late night and early morning hours on any night of the week. During that period (Midnight to 4 a.m.) on any night of the week between 80 percent and 90 percent of all fatally injured drivers had been drinking. At least 70 percent of those drivers had been drinking heavily enough to be considered legally intoxicated (Figure II-2).

FIGURE II-2
ALCOHOL TEST RESULTS OF FATALLY INJURED DRIVERS
BY TIME AND DAY
(15 States)

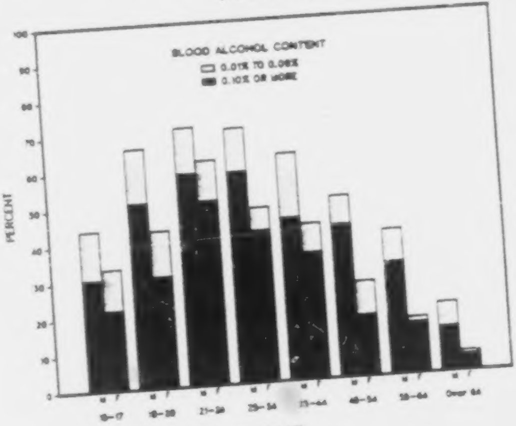


Age

The vast majority of drivers in all age groups who had been drinking were legally intoxicated (Figure II-3).

Females in every age group had a lower rate of drunken driving. However, in most age groups, fatally injured women drivers who had been drinking were more likely to have been drinking more heavily than men. This was especially true for those over age 55.

FIGURE II-3
ALCOHOL TEST RESULTS OF FATALLY
INJURED DRIVERS BY AGE AND SEX
(15 States)



NOTE: 1 FATALLY INJURED DRIVER OF UNKNOWN AGE

The vast majority of the fatally injured pedestrians in the 15 states who had been drinking were drinking heavily. More than half of the fatally injured pedestrians between 18 and 54 had been drinking (Figure II-4).

Figure II-5 shows the number of fatally injured drivers and surviving drivers tested for alcohol in all states. This indicates why a 15 state sample is used to make alcohol involvement estimates.

SAFETY BELTS

Few Americans take advantage of the lifesaving and injury reduction potential of safety belts. Only 4.7 percent of the 57,474 automobile occupants involved in fatal accidents were reported to have been wearing safety belts or other restraints.

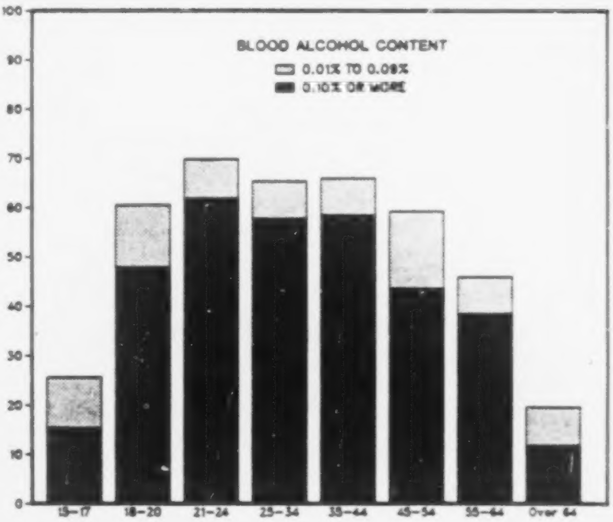
Automatic Safety Belts

An exception to the low safety belt use rate occurred in cars equipped with automatic safety belts. Studies of safety belt use in traffic have observed that people with automatic belts wear them more frequently than people who have standard belt systems. Occupant fatality rates for cars with automatic belts are substantially lower than for similar cars with standard belts.

FARS data for 1981-1983 show that Toyota Cressidas with automatic belts had half the fatality rate of Datsun Maxima 810s, which have standard safety belts.* The cars are similar in size, weight and in most other respects. Studies of safety belt use in traffic have observed automatic belt use of 96 percent in Toyota Cressidas. Automatic belt systems of somewhat different design are available in some Volkswagen Rabbits and Chevrolet Chevettes. Observed use rates in those models are lower (75 percent and 67 percent respectively) than the use rate in the Cressida.**

Although the observed safety belt use rate in Rabbits with automatic belts is not as high as in the Cressidas, analysis of FARS data for the last eight years shows that the fatality rate in Volkswagen Rabbits with automatic belts is significantly lower than in Rabbits with manual safety belts.***

FIGURE II-4
PEDESTRIAN FATALITIES WITH KNOWN ALCOHOL TEST RESULTS BY AGE



NOTE: 40 PEDESTRIAN FATALITIES OF UNKNOWN AGE

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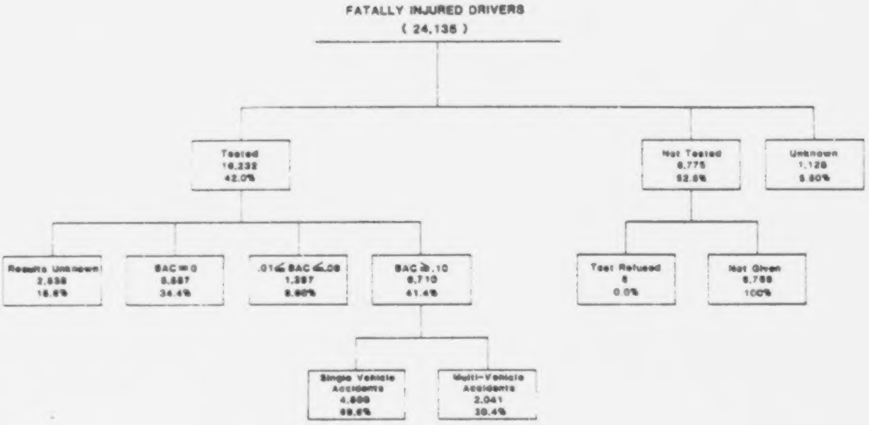
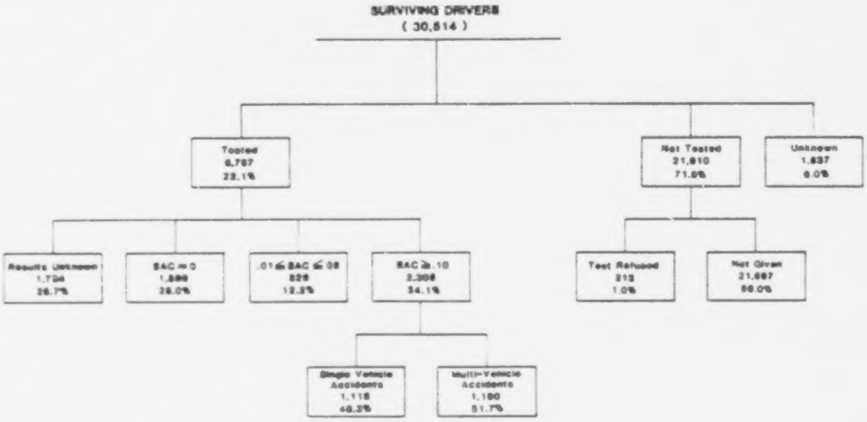
*"Fatality Rates in Toyota Cressidas with Automatic Belts," C.E. Nash and B. Eisemann, NHTSA Research Notes, October 1984.

**Restraint System Useage in the Traffic Population, DOT HS-806-582, July 1984.

***"Final Regulatory Impact Analysis", Report No. DOT-HS-806-572, July 1984.

FIGURE II-5
ALCOHOL TEST RESULTS OF DRIVERS
INVOLVED IN FATAL ACCIDENTS


FATALLY INJURED DRIVERS
(24,135)
Tested
16,232
42.0%
Not Tested
8,775
52.6%
Unknown
1,128
5.80%
Results Unknown
2,538
15.6%
BAC = 0
5,587
34.4%
.01 ≤ BAC ≤ .08
1,387
8.60%
BAC ≥ .10
6,710
41.4%
Test Refused
5
0.0%
Not Given
8,770
100%
Single Vehicle Accidents
4,669
69.6%
Multi-Vehicle Accidents
2,041
30.4%


SURVIVING DRIVERS
(30,514)
Tested
6,767
22.1%
Not Tested
21,910
71.8%
Unknown
1,837
6.0%
Results Unknown
1,794
26.7%
BAC = 0
1,899
28.0%
.01 ≤ BAC ≤ .08
828
12.2%
BAC ≥ .10
2,308
34.1%
Test Refused
213
1.0%
Not Given
21,697
99.0%
Single Vehicle Accidents
1,118
48.3%
Multi-Vehicle Accidents
1,190
51.7%

Even though cars with automatic belt systems clearly have higher belt use rates, of the 22 people involved in fatal accidents whose cars had automatic belt systems, almost half (eight drivers and two passengers) had taken active measures to circumvent those systems. Of the 17 who were killed, 7 were not using their automatic belts.**

Manual Safety Belts

A comparison of restraint use by fatally injured occupants with restraint use by occupants who were in fatal crashes, but not killed (Table II-6 and Table II-7) reveals:

- The frequency of seat belt use (6.1 percent) among passenger car occupants who survived fatal accidents was more than 85 percent higher than for occupants who were fatally injured in those accidents (3.3 percent).
- There was a use rate of more than 26 percent for children under 5 who survived fatal accidents compared to about 16 percent for those who were fatally injured.
- A lap and shoulder belt use rate among surviving drivers in fatal accidents that was more than twice that of fatally injured drivers.
- Automobile drivers in fatal accidents were more likely than passengers to have been wearing safety belts.

These comparisons, along with other studies, dramatically illustrate the life saving potential of safety belts and child restraints--if they are used.

TABLE II-6
RESTRAINT USED BY PASSENGER CAR OCCUPANTS
1983
(57,474)

	Drivers		Passengers		Unknown Occupants		Total	
	Number	%	Number	%	Number	%	Number	%
Restraint Used	1,826	5.5	894	3.7			2,720	4.7
Shoulder Belt	65	0.2	41	0.2			106	0.2
Lap Belt	319	1.0	289	1.2			608	1.1
Lap & Shoulder Belt	987	3.0	444	1.8			1,431	2.5
Child Safety Seat			293	1.2			293	0.5
Unknown Manual Restraint	155	0.5	115	0.5			270	0.5
Automatic Belt Used	7	0.0	5	0.0			12	0.0
Automatic Belt not Used	8	0.0	2	0.0			10	0.0
None Used	23,582	71.3	17,988	74.0	69	63.9	41,639	72.5
Unknown	7,936	24.0	5,130	21.1	39	36.1	13,105	22.8
Total	33,059	100.0	24,307	100.0	108	100.0	57,474	100.0

Note: No Passenger Cars equipped with Airbags were involved in Fatal Accidents in 1983.

**It is possible to infer from observational studies of safety belt use that, depending on the make of car and design of the automatic belt system, as many as 33 percent of the people whose cars have automatic safety belt systems take steps to avoid wearing those belts.

The advantages of wearing safety belts become even more apparent when the injuries of those involved in fatal accidents who were wearing them are compared to the injuries of those who were not. People wearing safety belts were more likely to escape injury and much less likely to receive incapacitating or fatal injuries. In fact, those who survived with no injuries were twice as likely to have been restrained as those who were killed (Figure II-6 and Table II-8).

TABLE II-7
RESTRAINT USED BY FATALLY INJURED PASSENGER CAR OCCUPANTS
1983
(22,975)

	Driver		Passenger		Unknown		Total	
	Number	%	Number	%	Number	%	Number	%
Restraint Used	453	3.0	295	3.8			748	3.3
Shoulder Belt	24	0.2	9	0.1			33	0.1
Lap Belt	88	0.6	67	0.9			155	0.7
Lap & Shoulder Belt	280	1.8	128	1.7			408	1.8
Child Safety Seat			56	0.7			56	0.2
Unknown Manual Restraint	55	0.4	31	0.4			86	0.4
Automatic Belt Used	6	0.0	4	0.1			10	0.0
Automatic Belt not Used	6	0.0	1	0.0			7	0.0
None Used	11,626	76.6	5,988	77.5	46	66.7	17,660	76.9
Unknown	3,095	20.4	1,442	18.7	23	33.3	4,560	19.8
Total	**15,180**	**100.0**	**7,726**	**100.0**	**69**	**100.0**	**22,975**	**100.0**

Note: No Passenger Cars equipped with Airbags were involved in Fatal Accidents in 1983.

FIGURE II-6
INJURY SEVERITY OF PASSENGER CAR OCCUPANTS IN FATAL ACCIDENTS
(57,474)

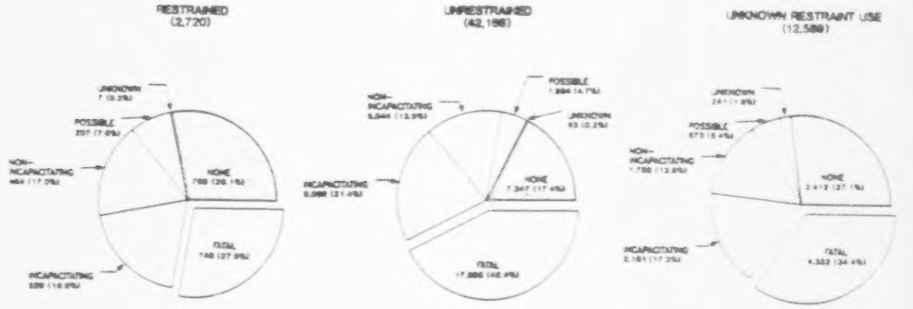


TABLE II-8
INJURY SEVERITY AND RESTRAINT USE BY PASSENGER CAR OCCUPANTS
1983
(57,474)

	Restraint Used		No Restraint Used		Unknown		Total	
	Number	%	Number	%	Number	%	Number	%
Fatalities	748	3.3	17,895	77.9	4,332	18.9	22,975	100.0
Drivers	453	3.0	11,792	77.7	2,935	19.3	15,180	100.0
Passengers	295	3.8	6,057	78.4	1,374	17.8	7,726	100.0
Unknown Occupants			46	66.7	23	33.3	69	100.0
Incapacitating Injury	529	4.5	9,002	76.9	2,181	18.6	11,712	100.0
Drivers	264	5.3	3,767	75.0	990	19.7	5,021	100.0
Passengers	265	4.0	5,216	78.3	1,182	17.7	6,663	100.0
Unknown Occupants			19	67.9	9	32.1	28	100.0
Nonincapacitating Injury	464	5.8	5,844	72.5	1,750	21.7	8,058	100.0
Drivers	226	6.0	2,663	71.1	858	22.9	3,747	100.0
Passengers	238	5.5	3,178	73.9	888	20.6	4,304	100.0
Unknown Occupants			3	42.9	4	57.1	7	100.0
Possible Injury	207	7.2	1,984	69.3	673	23.5	2,864	100.0
Drivers	106	7.7	937	68.5	326	23.8	1,369	100.0
Passengers	101	6.8	1,046	70.1	346	23.2	1,493	100.0
Unknown Occupants			1	50.0	1	50.0	2	100.0
No Injury	765	6.6	7,347	63.8	3,412	29.6	11,524	100.0
Drivers	482	6.4	4,719	62.8	2,318	30.8	7,519	100.0
Passengers	283	7.1	2,628	65.7	1,093	27.3	4,004	100.0
Unknown Occupants					1	100.0	1	100.0
Unknown	7	2.1	93	27.3	241	70.7	341	100.0
Drivers	2	0.9	39	17.5	182	81.6	223	100.0
Passengers	5	4.3	54	46.2	58	49.6	117	100.0
Unknown Occupants					1	100.0	1	100.0
Total	2,720	4.7	42,165	73.4	12,589	21.9	57,474	100.0

Between 1980 and 1983 restraint use among infants involved in fatal accidents increased almost 300 percent, an unprecedented increase attributable to child restraint laws passed in most states. Although such laws do not apply to older children, restraint use among those between five and fourteen involved in fatal accidents more than doubled, perhaps a residual effect of the laws (Table II-9).

The increase in child restraint use was accompanied by a drop in deaths and injuries. From 1980 to 1983, the number of fatally injured children under five decreased by 7.5 percent. The number of children who escaped injury in fatal crashes rose by a dramatic 44.2 percent (Table II-10).

TABLE II-9
PASSENGER CAR OCCUPANT RESTRAINT USE BY AGE
1980-1983

		Under 5	5 to 14	Over 14	Unknown	Total
Restraint Used						
	1980	96	57	1,657	10	1,820
	1983	369	118	2,191	42	2,720
	% Change	+284.4	+107.0	+32.2		+49.5
No Restraint Used						
	1980	1,284	2,493	46,092	472	50,341
	1983	1,192	2,252	38,171	550	42,165
	% Change	-7.2	-9.7	-17.2		-16.2
Unknown						
	1980	311	651	13,680	323	14,965
	1983	275	555	11,119	640	12,589
Total						
	1980	1,691	3,201	61,429	805	67,126
	1983	1,836	2,925	51,481	1,232	57,474
	% Change	+8.6	-8.6	-16.2		-14.4

TABLE II-10
RESTRAINT USE AND INJURY SEVERITY
FOR PASSENGER CAR OCCUPANTS UNDER 5 YEARS OLD
1980-1983

		Restraint Used	No Restraint Used	Unknown	Total
No Injury					
	1980	25	205	37	267
	1983	110	197	78	385
	% Change	+340.0	-3.9		+44.2
Possible Injury					
	1980	7	106	40	153
	1983	38	95	28	161
	% Change	+442.9	-10.4		+5.2
Nonincapacitating Injury					
	1980	14	239	71	324
	1983	77	226	53	356
	% Change	+450.0	-5.4		+9.9
Incapacitating Injury					
	1980	19	300	73	392
	1983	65	284	70	419
	% Change	+242.1	-5.3		+6.9
Fatal Injury					
	1980	31	431	84	546
	1983	76	387	42	505
	% Change	+145.2	-10.2		-7.5
Unknown					
	1980		3	6	9
	1983	3	3	4	10
Total					
	1980	96	1,284	311	1,691
	1983	369	1,192	275	1,836
	% Change	+284.4	-7.2		+8.5

People who are ejected from their vehicles in an accident lose the protection of the vehicle structure that would otherwise surround them. Their chances of surviving the accident are substantially diminished. Three out of four people who were fully or partially ejected from their cars were killed. People protected by restraints were much less likely to have been thrown from their cars than those who were not protected by restraints. Each of the types of restraint used provided a high degree of protection from ejection. (Table II-11 and Table II-12).

TABLE II-11
EJECTION, IMPACT POINT AND RESTRAINT USE FOR PASSENGER CAR OCCUPANTS
(57,474)

	Not Ejected		Totally Ejected		Partially Ejected		Unknown		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Restraint Used										
Noncollision	104	0.2	6	0.1	2	0.2			112	0.2
Frontal	1,503	3.1	6	0.1	5	0.4	4	0.3	1,518	2.6
Side	675	1.4	13	0.2	4	0.3	3	0.3	695	1.2
Other and Unknown	349	0.7	3	0.1	6	0.5	37	3.2	395	0.7
Subtotal	**2,631**	**5.3**	**28**	**0.5**	**17**	**1.4**	**44**	**3.8**	**2,720**	**4.7**
No Restraint Used										
Noncollision	1,676	3.4	1.184	20.0	150	12.7	24	2.0	3,034	5.3
Frontal	20,461	41.6	1,630	27.5	383	32.4	55	4.7	22,529	39.2
Side	8,729	17.7	1,068	18.0	276	23.4	41	3.5	10,114	17.6
Other and Unknown	4.498	9.1	976	16.5	207	17.5	807	68.9	6,488	11.3
Subtotal	**35,364**	**71.9**	**4,858**	**82.1**	**1,016**	**86.0**	**927**	**79.2**	**42,165**	**73.4**
Unknown										
Noncollision	369	0.7	197	3.3	17	1.4	18	1.5	601	1.0
Frontal	6,713	13.6	408	6.9	67	5.7	92	7.9	7,280	12.7
Side	2,708	5.5	267	4.5	49	4.1	65	5.6	3,089	5.4
Other and Unknown	1,418	2.9	160	2.7	16	1.4	25	2.1	1,619	2.8
Subtotal	**11,208**	**22.8**	**1,032**	**17.4**	**149**	**12.6**	**280**	**17.1**	**12,589**	**21.9**
Total	**49,283**	**100.0**	**5,918**	**100.0**	**1,182**	**100.0**	**1,171**	**100.0**	**57,474**	**100.0**

TABLE II-12
EJECTION BY RESTRAINT TYPE FOR RESTRAINED PASSENGER CAR OCCUPANTS
(2720)

Type of Restraint Used	Not Ejected	Other & Unknown	Total
Shoulder Belt	96	10	106
Lap Belt	592	16	608
Lap & Shoulder Belt	1,386	45	1,431
Child Safety Seat	282	11	293
Other Manual Restraint	264	6	270
Automatic Belt in Use	11	1	12
Total	**2,631**	**89**	**2,720**

TABLE II-13
NUMBER OF OCCUPANTS BY EJECTION AND VEHICLE TYPE
(85,350)

	Not Ejected		Totally Ejected		Partially Ejected		Unknown		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Passenger Cars	49,203	68.2	5,918	59.5	1,182	69.4	1,171	74.8	57,474	67.3
Light Trucks	13,824	19.2	2,652	26.7	381	22.4	217	13.9	17,074	20.0
Medium Trucks	776	1.1	77	0.8	10	0.6	5	0.3	868	1.0
Heavy Trucks	4,430	6.1	281	2.8	56	3.3	40	2.6	4,807	5.6
Buses	1,050	1.5	43	0.4	5	0.3	1	0.1	1,099	1.3
Special Vehicles	1,879	2.6	913	9.2	60	3.5	54	3.4	2,906	3.4
Unknown	980	1.4	56	0.6	8	0.5	78	5.0	1,122	1.3
Total	**72,142**	**100.0**	**9,940**	**100.0**	**1,702**	**100.0**	**1,566**	**100.0**	**85,350**	**100.0**

Note: 5,313 Motorcycle and Other Motorized Cycle Riders were not included in this table.

TABLE II-14
NUMBER OF OCCUPANT FATALITIES BY EJECTION AND VEHICLE TYPE
(30,576)

	Not Ejected		Totally Ejected		Partially Ejected		Unknown		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Passenger Cars	16,993	73.9	4,371	62.8	975	69.3	636	81.7	22,975	75.1
Light Trucks	3,243	15.1	1,739	25.0	313	22.3	84	10.8	5,379	17.6
Medium Trucks	101	0.5	52	0.7	10	0.7	3	0.4	166	0.5
Heavy Trucks	509	2.4	226	3.2	49	3.5	22	2.8	806	2.6
Buses	37	0.2	14	0.2	2	0.1	0	0.0	53	0.2
Special Vehicles	462	2.2	523	7.5	50	3.6	25	3.2	1,060	3.5
Unknown	86	0.4	36	0.5	7	0.5	8	1.0	137	0.4
Total	**21,431**	**100.0**	**6,961**	**100.0**	**1,406**	**100.0**	**778**	**100.0**	**30,576**	**100.0**

Note: 4,264 Fatally Injured Motorcyle and Other Motorized Cycle Riders were not included in this table.

Restraint use in light trucks, medium trucks, and buses, was lower than in passenger cars. Restraint use in heavy trucks and special vehicles was higher than in passenger cars (Table II-11 and Table II-15).

TABLE II-15
RESTRAINT USE BY VEHICLE TYPE FOR NON PASSENGER CAR OCCUPANTS
(27,861)

	Light Trucks		Medium Trucks		Heavy Trucks		Buses		Special Vehicles		Unknown	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Restraint Used	374	2.2	35	4.0	330	6.9	43	3.9	162	5.6	24	2.1
No Restraint Used	13,277	77.8	613	70.7	3,536	73.5	919	83.6	2,176	75.3	395	35.2
Restraint Use Unknown	3,423	20 0	220	25.3	941	19.6	137	12.5	553	19.1	703	62.7
Total	**17,074**	**100.0**	**868**	**100.0**	**4,807**	**100.0**	**1,099**	**100.0**	**2,891**	**100.0**	**1,122**	**100.0**

Note: 5,313 Motorcycle and Other Motorised Cycle riders were not included in this table.

TABLE II-16
RESTRAINT USE BY VEHICLE TYPE FOR NON PASSENGER CAR OCCUPANT FATALITIES
(7600)

	Light Trucks		Medium Trucks		Heavy Trucks		Buses		Special Vehicles		Unknown	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Restraint Used	55	1.0	1	0.6	16	2.0	0	0.0	40	3.8	5	3.6
No Restraint Used	4,503	83.7	130	78.3	645	80.0	51	96.2	853	80.5	102	74.5
Restraint Use Unknown	821	15.3	35	21.1	145	18.0	2	3.8	166	15.7	30	21.9
Total	**5,379**	**100.0**	**166**	**100.0**	**806**	**100.0**	**53**	**100.0**	**1,059**	**100.0**	**137**	**100.0**

Note: 4,264 Motorcycle and Other Motorized Cycle rider Fatalities were not included in this table.

III. Fatality Profile 1983

During 1983, 42,584 men, women, and children died in motor vehicle traffic accidents. That's an average of one traffic fatality every 12.3 minutes throughout the entire year. Although this represents a 3.1 percent decline from the 1982 death toll of 43,945, and a 16.7 percent reduction from 1980, traffic accidents are still one of the major causes of premature death in the United States.

Some characteristics of 1983 fatalities are shown in Figures III-1 through III-4:

- Passenger car occupants, who were more than half of all fatalities, had only 1.5 percent fewer fatalities than in 1982. Pedestrian fatalities, accounting for the second largest share (16 percent), declined 6.9 percent.
- Most people killed in 1983 accidents were drivers--24,135 down 2.3 percent from 1982. Passenger fatalities, the next largest group at nearly one quarter, were down 2.5 percent from 1982.
- Head-on and angle crashes account for 78.3 percent of fatalities in multi-vehicle crashes.
- The most frequent first harmful event in fatal single vehicle accidents, was when a fixed object was hit (48.2 percent).

FIGURE III-1
DISTRIBUTION OF FATALITIES BY ROAD USER
(42,584)

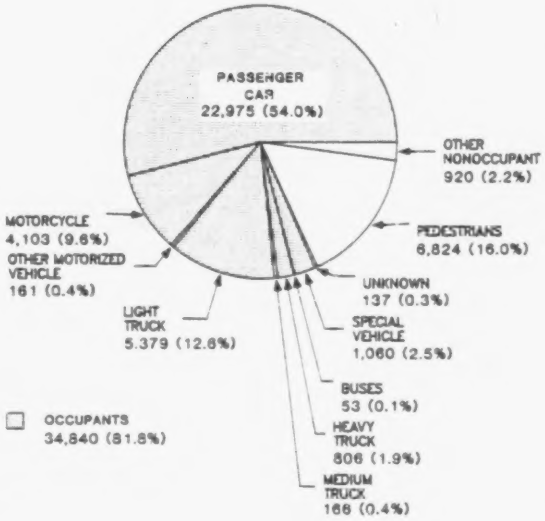


FIGURE III-2
DISTRIBUTION OF FATALITIES
BY PERSON TYPE
(42,584)

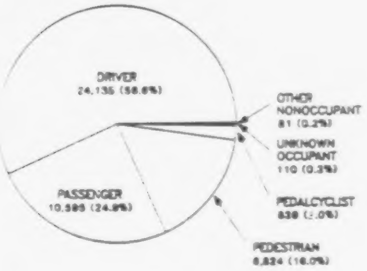


FIGURE III-3
DISTRIBUTION OF FATALITIES BY
FIRST HARMFUL EVENT
SINGLE VEHICLE ACCIDENTS
(24,595)

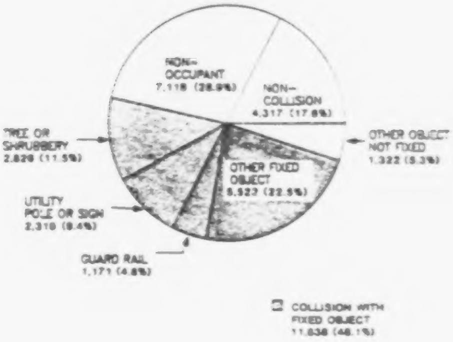
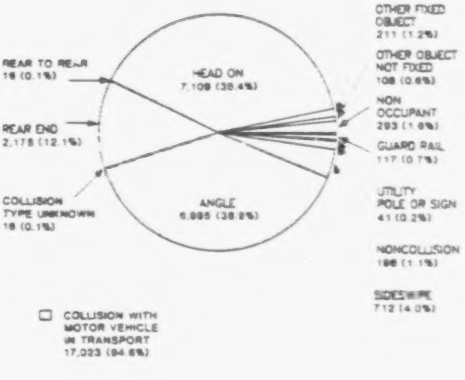
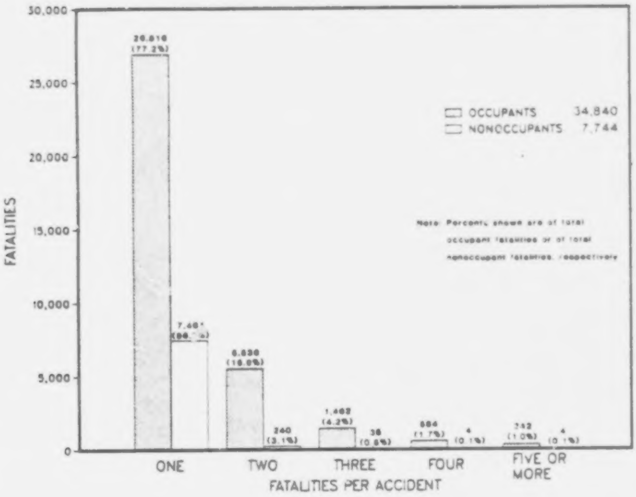


FIGURE III-4
DISTRIBUTION OF FATALITIES BY
FIRST HARMFUL EVENT AND MANNER
OF COLLISION—MULTI-VEHICLE ACCIDENTS
(17,989)



Ninety-one percent of the 37,971 fatal accidents resulted in a single death each (Figure III-5). Accidents in which more than two people were killed claimed only 2,388 (6.9 percent) of all the occupants killed and only 43 (0.6 percent) of all the nonoccupants killed. Overall, an average of 1.1 deaths resulted from each fatal accident.

FIGURE III-5
NUMBER OF FATALITIES PER FATAL ACCIDENT
(42,584)



Comparisons across several years are best made using fatality rates based on exposure data such as the amount of motor vehicle travel. Vehicle miles of travel (VMT), the number of driver licenses in force, and vehicle registration data, from the Federal Highway Administration (FHWA), were used for this purpose. In Table III-1 rates are computed per 100 million VMT, per 1,000 licenses, and per 1,000 registered vehicles for each year from 1978 to 1983.

Steady annual increases in total deaths coincided with continued increases in VMT each year through 1979. However, in 1979 and 1980 fatalities remained almost constant, although VMT decreased. Thus, the rate of deaths per mile driven increased. In 1981 this trend reversed: travel began to increase while the number of people killed dropped. The fatality rate declined 6.2 percent from 1980 to 1981 and the decline doubled from 1981 to 1982. From 1982 to 1983 the rate of decline slowed to 6.5 percent. During the period of decline from 1980 through 1983, deaths per 100 million VMT dropped 23.7 percent to a record low of 2.58.

The rate of fatalities per 1,000 licenses in force dropped slightly from 1978 to 1979, continued to decline gradually through 1981, then dropped dramatically in 1982. During 1983, it declined by another 5.5 percent to 0.276 fatalities per 1,000 licensed drivers. This pattern of decline was also the case for the fatality rate per 1,000 registered vehicles.

TABLE III-1
FATALITY RATES

	1978	1979	1980	1981	1982	1983
Number of Fatal Accidents	44,433	45,223	45,284	44,000	39,092	37,971
Number of Traffic Fatalities	50,331	51,093	51,091	49,301	43,945	42,584
Vehicle-Miles Traveled (100 Million)	15,447	15,291	15,106	15,550	15,924	16,491
Fatalities Per 100 Million Vehicle-Miles	3.26	3.34	3.38	3.17	2.76	2.58
Annual Percentage Change in Fatalities Per 100 Million Vehicle-Miles Traveled	0.0	+2.4	+1.2	-6.5	-12.9	-6.5
Licensed Drivers (1,000)	140,840	143,280	145,970	147,970	150,310	154,221
Fatalities Per 1,000 Licensed Drivers	0.357	0.356	0.350	0.332	0.292	0.276
Annual Percentage Change in Fatalities Per 1,000 Licensed Drivers	+2.9	-0.3	-1.7	-4.9	-12.0	-5.5
Registered Vehicles (1,000)	153,637	159,621	164,852	165,732	165,253	169,446
Fatalities Per 1,000 Registered Vehicles	0.328	0.320	0.310	0.297	0.266	0.251
Annual Percentage Change in Fatalities Per 1,000 Registered Vehicles	+0.9	-2.4	-3.1	-4.1	-10.4	-5.6

TABLE III-2
VEHICLES INVOLVED BY VEHICLE
1978-1983

	1978		1979		1980		1981		1982		1983	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Passenger Cars	40,544	63.2	39,999	61.8	39,059	61.5	38,725	61.8	34,209	60.9	33,288	60.4
Motorcycles	4,512	7.0	4,730	7.3	5,009	7.9	4,774	7.6	4,311	7.7	4,141	7.5
Other Motorized Cycles	131	0.2	186	0.3	185	0.3	157	0.3	179	0.3	160	0.3
Light Trucks	10,707	16.7	11,490	17.7	11,477	18.1	10,884	17.4	10,065	17.9	9,870	17.9
Medium Trucks	1,142	1.8	1,203	1.9	1,092	1.7	888	1.4	662	1.2	664	1.2
Heavy Trucks	4,610	7.2	4,877	7.5	4,284	6.7	4,317	6.9	3,910	7.0	4,174	7.6
Buses	372	0.6	347	0.5	330	0.5	341	0.5	288	0.5	306	0.6
Special Vehicles	1,762	2.7	1,599	2.5	1,631	2.6	1,856	3.0	1,439	2.5	1,523	2.8
Unknown	364	0.6	331	0.5	418	0.7	724	1.2	1,111	2.0	973	1.8
Total	64,144	100.0	64,762	100.0	63,485	100.0	62,666	100.0	56,174	100.0	55,099	100.0

TABLE III-3
OCCUPANT FATALITIES BY VEHICLE TYPE
1978-1983

	1978		1979		1980		1981		1982		1983	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Passenger Cars	28,153	67.8	27,808	66.3	27,449	65.5	26,545	65.7	23,330	65.4	22,975	65.9
Motorcycles	4,451	10.7	4,713	11.2	4,961	11.8	4,716	11.7	4,270	12.0	4,103	11.8
Other Motorized Cycles	126	0.3	181	0.4	183	0.4	158	0.4	183	0.5	161	0.5
Light Trucks	6,048	14.6	6,455	15.4	6,506	15.7	6,129	15.2	5,580	15.7	5,379	15.4
Medium Trucks	351	0.8	344	0.8	285	0.7	235	0.6	154	0.4	166	0.5
Heavy Trucks	1,042	2.5	1,087	2.6	976	2.3	896	2.2	789	2.2	806	2.3
Buses	41	0.1	39	0.1	46	0.1	56	0.1	35	0.1	53	0.2
Special Vehicles	1,069	2.6	1,057	2.5	1,178	2.8	1,213	3.0	1,001	2.8	1,060	3.0
Unknown	252	0.6	246	0.6	283	0.7	445	1.1	304	0.9	137	0.4
Total	41,533	100.0	41,930	100.0	41,927	100.0	40,393	100.0	35,646	100.0	34,840	100.0

TABLE III-4
DISTRIBUTION OF FATALITIES BY PERSON ROLE
1978-1983

	1978		1979		1980		1981		1982		1983	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Drivers	28,283	56.2	28,863	56.5	28,816	56.4	28,200	57.2	24,690	56.2	24,135	56.7
Passengers	13,108	26.0	12,964	25.4	12,972	25.4	12,055	24.5	10,897	24.7	10,595	24.9
Unknown Occupants	142	0.3	103	0.2	139	0.3	169	0.3	89	0.2	110	0.3
Pedestrians	7,795	15.5	8,096	15.8	8,070	15.8	7,837	15.9	7,331	16.7	6,824	16.0
Pedalcyclists	892	1.8	932	1.8	965	1.9	936	1.9	883	2.0	839	2.0
Other or Unknown	111	0.2	135	0.3	129	0.3	104	0.2	85	0.2	81	0.2
Total	50,331	100.0	51,093	100.0	51,091	100.0	49,301	100.0	43,945	100.0	42,584	100.0

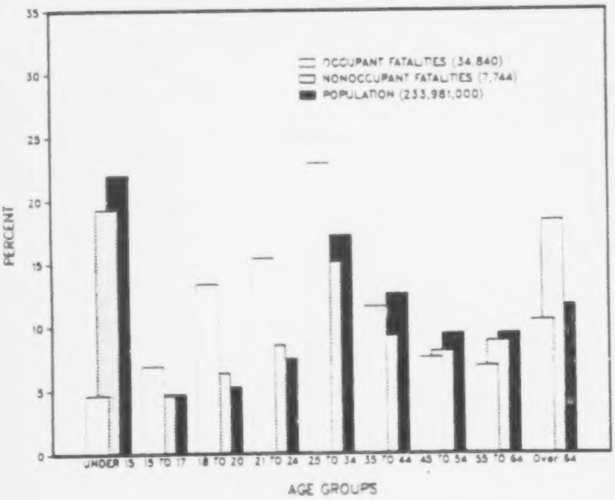
Source for population: U.S. Bureau of Census

During the year, 90,663 people were occupants of vehicles involved in fatal accidents. Of these occupants, 60 percent were drivers; 44.2 percent of these drivers were killed. Of all the involved passengers, 29.6 percent were killed.

More than half of the fatally-injured passengers and 34 percent of the fatally injured drivers were younger than 25, and 61 percent of all drivers killed were younger than 35 (Table III-5). The percentage of young people, 15-24 years old, among all people killed in motor vehicle accidents in 1983 was more than double that age group's representation in the national population. People over 64 were also significantly overrepresented in nonoccupant fatalities (Figure III-6).

Differences in the frequency of fatal accidents in different time segments are the result of a variety of factors, and the influence of these factors shift as the time interval under consideration changes. For example, it is probable that VMT has an influence on the seasonal distribution of fatalities. This influence seems to be overshadowed by factors associated with various parts of the day. More drivers are likely to become drowsy or to be under the influence of alcohol at night, when traffic density is low, than during daylight hours. It is important to consider these other factors when viewing the remaining figures and tables of this chapter.

FIGURE III-6
PERCENT DISTRIBUTION OF U S. POPULATION AND FATALITIES



Source for population: U.S. Bureau of Census

NOTE: 82 Fatalities where Age was Unknown

TABLE III-5
DISTRIBUTION OF OCCUPANT FATALITIES BY AGE AND ROLE

	Drivers		Passengers		Unknown		Total	
	Number	%	Number	%	Number	%	Number	%
Under 15	133	0.6	1,454	13.7	3	2.7	1,590	4.6
15 to 17	1,192	4.9	1,191	11.2	12	10.9	2,395	6.9
18 to 20	3,060	12.7	1,580	14.9	34	30.9	4,674	13.4
21 to 24	3,873	16.0	1,456	13.7	28	25.5	5,357	15.4
25 to 34	6,331	26.2	1,635	15.4	18	16.4	7,984	22.9
35 to 44	3,257	13.5	794	7.5	7	6.4	4,058	11.6
45 to 54	2,061	8.5	571	5.4	2	1.8	2,634	7.6
55 to 64	1,793	7.4	620	5.9	2	1.8	2,415	6.9
Over 64	2,406	10.0	1,243	11.7	2	1.8	3,651	10.5
Unknown	29	0.1	51	0.5	2	1.8	82	0.2
Total	**24,135**	**100.0**	**10,595**	**100.0**	**110**	**100.0**	**34,840**	**100.0**

As in previous years, the greatest number of fatalities in 1983 occurred in the summer. Forty-one percent more traffic deaths occurred during summer than during winter (Figure III-7). About the same number of fatalities occurred during the spring and fall seasons.

Fatalities by month for 1983 (Table III-6) reflect similar seasonal variations. Fatalities increased after February, then decreased after August. However, the decrease in the latter months of 1983 was not as great as in winter months of previous years. Fatalities for motorcycle riders were far more seasonal. Nonoccupant fatalities varied only slightly from month to month.

Several factors can influence or at least correlate with these monthly changes from year to year: (a) the yearly increase or decrease in total fatalities, (b) changes in the severity and duration of winter conditions, and (c) fuel availability, economic conditions, and their effects on driving habits and VMT. While the precise effect of each of these is uncertain, they should be considered when examining monthly fatalities.

FIGURE III-7
SEASONAL DISTRIBUTION
OF FATALITIES
(42,584)

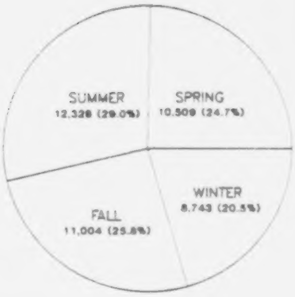
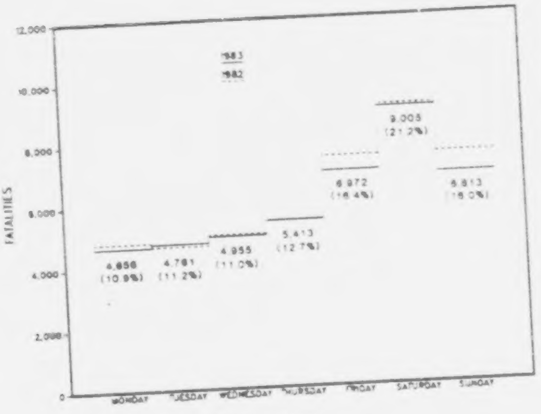


TABLE III-6
FATALITIES BY MONTH AND PERSON TYPE
(42,584)

	Motorcyclists		Non-occupants		All Others		Total	
	Number	%	Number	%	Number	%	Number	%
January	113	2.8	577	7.5	2,184	7.1	2,874	6.8
February	127	3.1	520	6.7	2,048	6.7	2,695	6.3
March	194	4.7	600	7.7	2,284	7.4	3,078	7.2
April	310	7.5	581	7.5	2,366	7.7	3,257	7.7
May	457	11.1	605	7.8	2,606	8.5	3,668	8.6
June	508	12.4	601	7.8	2,594	8.4	3,703	8.7
July	656	15.9	681	8.8	2,809	9.1	4,146	9.7
August	581	14.2	709	9.2	2,865	9.3	4,155	9.8
September	526	13.0	702	9.1	2,759	9.0	3,987	9.4
October	334	8.1	751	9.7	2,885	9.4	3,970	9.3
November	180	4.4	694	9.0	2,677	8.7	3,551	8.3
December	117	2.8	723	9.3	2,660	8.7	3,500	8.2
Total	**4,103**	**100.0**	**7,744**	**100.0**	**30,737**	**100.0**	**42,584**	**100.0**

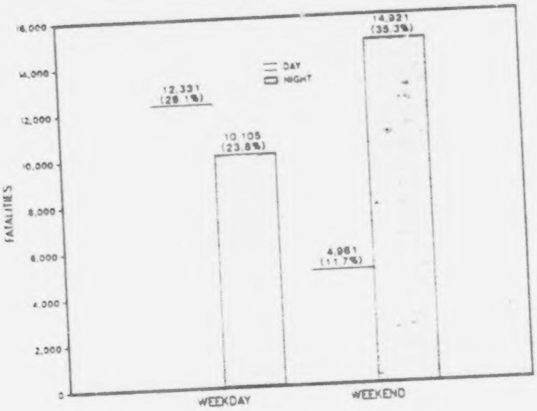
As in previous years, accidents on Fridays, Saturdays, and Sundays resulted in more than half of all deaths. Fatalities from Friday and Sunday accidents decreased substantially during 1983 (Figure III-8). Although weekends* constitute only about one-third of a week (60 out of 168 hours), almost half (47.0 percent) of all fatalities occurred on weekends. More than one-third of all fatalities (35.3 percent) occurred on weekend nights (Figure III-9).

FIGURE III-8
FATALITIES BY DAY OF WEEK
(42.564)



NOTE: 9 Fatalities where day of week was unknown

FIGURE III-9
FATALITIES BY TIME OF DAY AND WEEK *
(42,584)



NOTE: 268 Fatalities where time was unknown

* "Weekday" - 6 a.m. Monday through 5:59 p.m. Friday.
"Weekend" - 6 p.m. Friday through 5:59 a.m. Monday.
"Day" - 6 a.m. through 5:59 p.m.
"Night" - 6 p.m. through 5:59 a.m.

Between 1982 and 1983, male fatalities dropped 4.3 percent, while female fatalities increased by 0.2 percent.

In 1983, as in prior years, males outnumbered females as fatal accident victims in every age group. Ages 15-34, of both sexes combined, accounted for more than half of all fatalities (54.2 percent). Males were 76.2 percent of the fatalities in that age group (Table I-5 and Figure III-10). People older than 64 have a greater chance of dying if they are in a fatal accident than do younger vehicle occupants. For most age groups, their fatal crash involvement and their number of fatalities were roughly proportionate to their numbers in the population, with the exception of people who are over the age of 64. Those over 64 are only seven percent of all occupants in fatal accidents. However, 13.5 percent of all fatally injured occupants are older than 64 (Table III-5 and Table III-7).

FIGURE III-10
FATALITIES BY AGE AND SEX
(42,584)

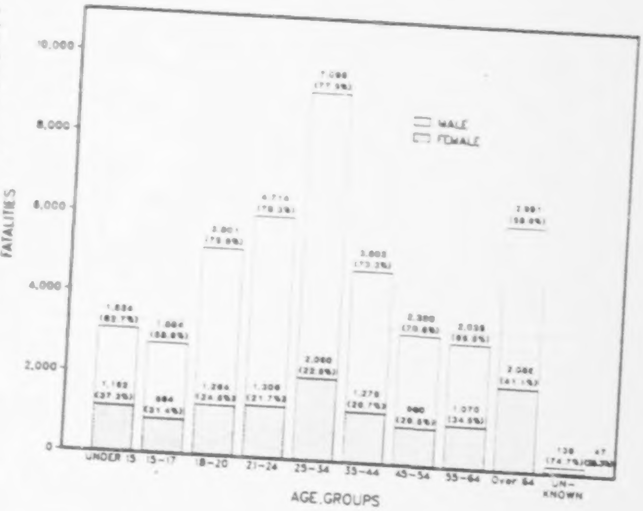


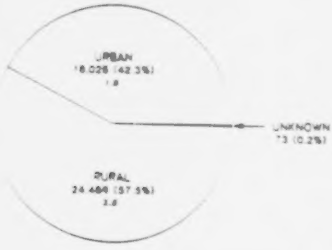
TABLE III-7
DISTRIBUTION OF OCCUPANTS BY AGE AND ROLE
(90,663)

	Drivers		Passengers		Unknown		Total	
	Number	%	Number	%	Number	%	Number	%
Under 15	203	0.4	6,813	19.0	5	3.0	7,021	7.7
15 to 17	2,839	5.2	4,403	12.3	18	10.7	7,260	8.0
18 to 20	6,707	12.3	5,204	14.5	43	25.4	11,954	13.2
21 to 24	8,432	15.4	4,534	12.6	46	27.2	13,012	14.4
25 to 34	14,469	26.5	5,291	14.8	37	21.9	19,797	21.8
35 to 44	8,066	14.8	2,526	7.0	9	5.3	10,601	11.7
45 to 54	4,990	9.1	1,704	4.8	3	1.8	6,697	7.4
55 to 64	3,862	7.1	1,557	4.3	2	1.2	5,421	6.0
Over 64	4,026	7.4	2,311	6.4	2	1.2	6,339	7.0
Unknown	1,055	1.9	1,502	4.2	4	2.4	2,561	2.8
Total	**54,649**	**100.0**	**35,845**	**100.0**	**169**	**100.0**	**90,663**	**100.0**

Environmental aspects of 1983 fatal accidents are presented in Figures III-11, III-12 and III-13.

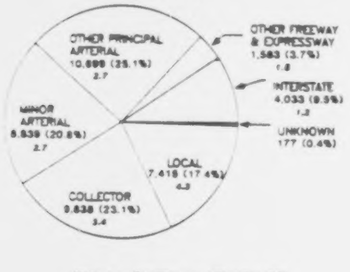
- o As in previous years, rural areas had more fatalities and a higher fatality rate than urban areas (Figure III-11).
- o Accidents on arterials caused more than half of all fatalities (Figure III-12). Based on vehicle miles traveled, interstate and other limited access highways were more than twice as safe as any other type of highway.
- o Most deaths resulted from accidents that occurred during normal weather conditions (Figure III-13), with only 13.2 percent of them associated with inclement weather.

FIGURE III-11
DISTRIBUTION OF FATALITIES
AND FATALITY RATES
BY LAND USE
(42,584)



Note: x.x - Fatalities per 100 million VMT

FIGURE III-12
DISTRIBUTION OF FATALITIES
AND FATALITY RATES
BY ROADWAY FUNCTION CLASS
(42,584)



Note: x.x - Fatalities per 100 million VMT

FIGURE III-13
DISTRIBUTION OF FATALITIES
BY ATMOSPHERIC CONDITION
(42,584)

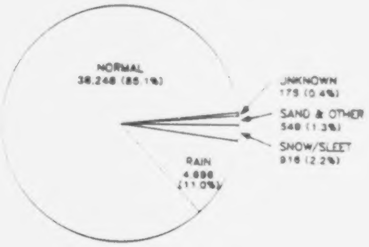


Table III-8 lists the number of deaths that occurred on major holidays. The days selected for each holiday are those on which it was assumed most holiday travelers were on the road. The New Year's holiday includes deaths from accidents that occurred on January 1, 1983 and December 31, 1983.

The days included in holiday periods accounted for 7.7 percent of all the deaths in 1983. The most fatal holiday was the 4-day Labor Day period (718 fatalities--1.7 percent of the year's total), followed by the 4-day periods around Independence Day (662 deaths), and Memorial Day (622 deaths). By way of comparison, fatalities are almost as high during a typical non-holiday 4-day period, Friday through Monday, (an average of 525 fatalities - 1.2 percent of the annual toll - occurred in 1983, a rate virtually unchanged from 1982). It is probably safe to assume, in view of the substantial travel which occurs during holiday periods, that the fatality rate per 100,000,000 VMT is, in fact, lower during those periods than for a typical non-holiday period. VMT data for holidays are not available.

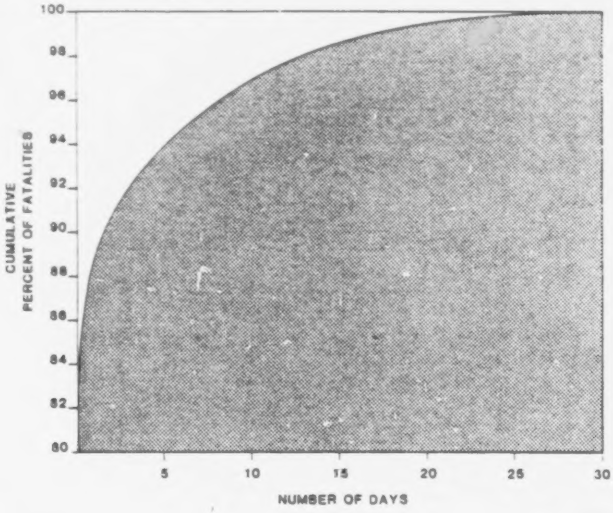
Four of every five deaths (81.2 percent) that resulted from traffic accidents occurred on the same day as did the accident. More than ninety percent (93.8) of all fatalities occur within five days of the accident (Figure III-14).

TABLE III-8
1983 HOLIDAY FATALITIES

		Number of Fatalities	Percent of Total
Non-holidays		39,301	92.3
New Year's Day*	(Saturday)	165	0.4
Memorial Day	(Friday - Monday)	622	1.5
Fourth of July	(Friday - Monday)	662	1.5
Labor Day	(Friday - Monday)	718	1.7
Thanksgiving	(Wednesday - Sunday)	603	1.4
Christmas	(Friday - Monday)	414	1.0
New Year's Eve**	(Saturday)	99	0.2
Total 1983 Fatalities		**42,584**	**100.0**
Average	(Friday - Monday)	525	1.2

* January 1, 1983
** December 31, 1983

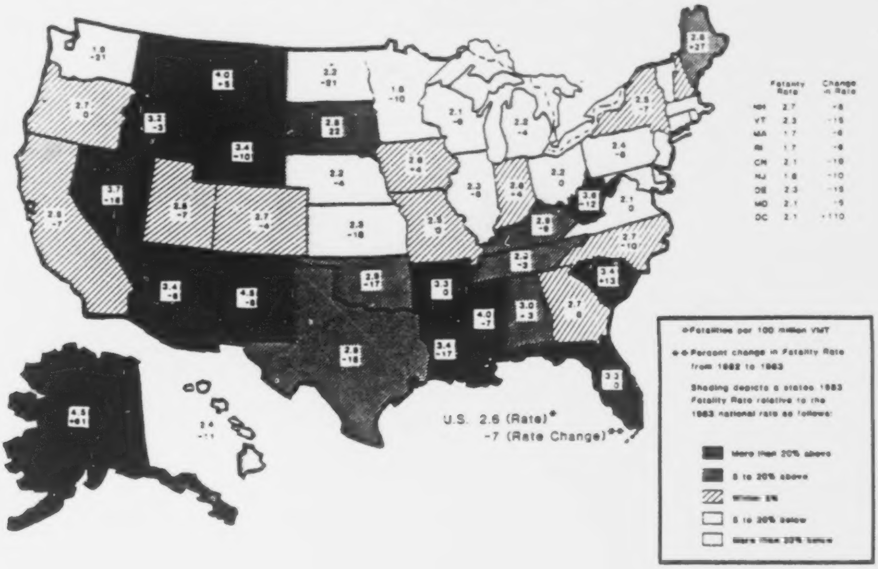
FIGURE III-14
NUMBER OF DAYS BETWEEN ACCIDENT AND FATALITY



IV. State Statistics

During 1983, thirty-seven states had fewer fatalities per 100 million vehicle miles of travel* (VMT) than they did in 1982. Twenty-four had death rates in 1983 less than the 2.6 Percent national average (Figure IV-1).

FIGURE IV-1
1983 FATALITY RATE AND PERCENT CHANGE IN FATALITIES FROM 1982


Fatality Rate
Change in Rate
NH 2.7 -8
VT 2.3 -15
MA 1.7 -6
RI 1.7 -8
CN 2.1 -10
NJ 1.8 -10
DE 2.3 -15
MD 2.1 -5
DC 2.1 +110
U.S. 2.6 (Rate)*
-7 (Rate Change)**
*Fatalities per 100 million VMT
**Percent change in Fatality Rate from 1982 to 1983
Shading depicts a states 1983 Fatality Rate relative to the 1983 national rate as follows:
More than 20% above
5 to 20% above
Within 5%
5 to 20% below
More than 20% below

---

*VMT by state are preliminary estimates made by FHWA.

Table IV-1 lists state fatalities for 1978 through 1983 and compares 1983 fatalities to 1982 fatalities. Nationally the number of fatalities dropped by 3.1 percent in 1983. However, the reductions were not uniform from one state to another. A few states had decreases of about 20 percent (North Dakota, Washington and Oklahoma) while others had substantial increases. Fatalities in southwestern states continued to drop while southeastern states showed marked increases. With the exception of Maine and New Hampshire, which had sizable increases, fatalities dropped in the northeast.

TABLE IV-1
FATALITIES FOR 1978-1983
PERCENT CHANGE 1982-1983

State	1978	1979	1980	1981	1982	1983	% Change in Fatalities 1982-1983
Alabama	1,142	998	940	933	839	930	10.9
Alaska	127	90	88	100	105	150	42.9
Arizona	1,027	1,029	947	917	724	675	-6.8
Arkansas	571	548	588	536	550	557	1.3
California	5,310	5,542	5,496	5,170	4,615	4,573	-0.9
Colorado	694	691	709	755	668	646	-3.3
Connecticut	452	568	575	518	515	438	-15.0
Delaware	125	118	153	111	122	110	-9.8
District of Columbia	49	44	41	49	35	66	88.6
Florida	2,235	2,593	2,825	3,044	2,653	2,683	1.1
Georgia	1,472	1,524	1,508	1,418	1,229	1,296	5.5
Hawaii	194	205	186	150	163	141	-13.5
Idaho	327	333	331	293	256	263	2.7
Illinois	2,140	2,017	1,975	1,821	1,651	1,526	-7.6
Indiana	1,266	1,299	1,166	1,147	961	1,016	5.7
Iowa	638	655	626	613	480	514	7.1
Kansas	572	519	595	580	498	411	-17.5
Kentucky	878	896	820	812	822	778	-5.4
Louisiana	1,079	1,195	1,219	1,233	1,091	933	-14.5
Maine	237	236	265	219	166	224	34.9
Maryland	711	671	756	781	640	656	2.5
Massachusetts	861	917	881	746	659	651	-1.2
Michigan	2,020	1,823	1,750	1,564	1,392	1,314	-5.6
Minnesota	962	867	848	753	571	555	-2.8
Mississippi	784	715	695	744	730	715	-2.1
Missouri	1,190	1,147	1,175	1,034	890	911	2.4
Montana	270	332	325	338	254	286	12.6
Nebraska	340	330	396	378	261	255	-2.3
Nevada	305	354	346	294	280	253	-9.6
New Hampshire	171	184	194	148	173	191	10.4
New Jersey	1,124	1,142	1,120	1,162	1,061	932	-12.2
New Mexico	669	633	606	544	577	531	-8.0
New York	2,436	2,396	2,610	2,487	2,162	2,075	-4.0
North Carolina	1,492	1,527	1,503	1,475	1,303	1,234	-5.3
North Dakota	181	128	151	166	148	116	-21.6
Ohio	2,047	2,281	2,033	1,776	1,607	1,582	-1.6
Oklahoma	901	853	959	989	1,054	848	-19.5
Oregon	708	676	646	645	518	550	6.2
Pennsylvania	2,081	2,153	2,089	2,029	1,819	1,721	-5.4
Rhode Island	108	123	129	102	105	100	-4.8
South Carolina	883	900	852	845	730	844	15.6
South Dakota	191	211	228	177	148	175	18.2
Tennessee	1,241	1,210	1,153	1,104	1,055	1,037	-1.7
Texas	3,914	4,168	4,366	4,623	4,213	3,823	-9.3
Utah	370	321	334	364	295	283	-4.1
Vermont	119	159	137	114	107	94	-12.2
Virginia	1,063	1,016	1,045	1,011	881	901	2.3
Washington	985	1,015	971	862	748	698	-6.7
West Virginia	457	512	523	410	450	425	-5.6
Wisconsin	971	985	972	918	770	725	-5.8
Wyoming	241	244	245	264	201	173	-13.9
Total	50,331	51,093	51,091	49,301	43,945	42,584	-3.1

In most states, the two most frequently reported first harmful events in fatal accidents were collisions with motor vehicles in transport and collisionc with fixed objects (Table IV-2). One notable exception was the high incidence of overturn (rollover) in fatal accidents in the more sparsely populated and mountainous states of Colorado, Idaho, Montana, Nevada, New Mexico, North Dakota, Utah, and Wyoming. In other areas (Arizona, Florida, New Mexico, New York, Rhode Island, Utah and, most notably, the District of Columbia) collision with a pedestrian or pedalcyclist ranked as either the most frequent or second most frequent first harmful event in fatal accidents. More than one-third (37.9 percent) of all fatal accidents in the District of Columbia were collisions with nonoccupants.

TABLE IV-2
PERCENT OF FATAL ACCIDENTS BY FIRST HARMFUL EVENT

		Collision with				Noncollision		
State	Total Accidents	Motor Vehicle in Transport	Nonoccupant	Fixed Objects	Other Object not Fixed	Overturn	Other	Unknown
Alabama	806	40.4	14.3	31.3	2.1	9.9	1.7	
Alaska	135	39.3	16.3	17.0	2.2	23.7		1.5
Arizona	616	38.5	20.8	16.9	2.1	19.8	1.6	0.3
Arkansas	485	38.4	12.6	29.3	4.3	13.6	1.9	
California	4,089	35.2	21.6	27.9	3.7	10.1	1.4	0.0
Colorado	591	30.3	16.4	27.2	2.7	20.6	2.7	
Connecticut	404	31.4	16.3	42.8	3.5	4.2	1.7	
Delaware	98	37.8	19.4	33.7	2.0	7.1		
District of Columbia	58	37.9	37.9	19.0			5.2	
Florida	2,412	41.3	27.8	19.0	2.4	6.8	2.6	
Georgia	1,157	40.4	18.1	29.3	3.2	7.3	1.7	
Hawaii	133	33.1	19.5	34.6	3.8	5.3	3.8	
Idaho	231	33.3	11.7	22.1	4.8	26.8	1.3	
Illinois	1,379	39.4	19.7	27.0	4.6	6.7	2.5	
Indiana	876	44.5	12.7	30.0	5.8	5.3	1.7	
Iowa	437	48.1	7.6	26.3	3.2	11.9	3.0	
Kansas	361	40.2	8.3	29.4	6.9	13.3	1.9	
Kentucky	690	33.9	13.2	40.9	1.9	8.1	2.0	
Louisiana	836	41.7	20.9	29.5	3.3	3.5	1.0	
Maine	198	27.8	13.1	39.9	1.5	14.1	3.5	
Maryland	607	40.9	22.7	29.8	2.1	2.6	1.8	
Massachusetts	605	29.4	25.6	40.7	1.2	1.7	1.5	
Michigan	1,192	37.3	22.8	27.1	2.9	8.4	1.5	
Minnesota	498	45.8	14.7	21.3	3.4	13.7	1.2	
Mississippi	626	33.5	15.5	33.2	2.4	14.1	1.3	
Missouri	810	40.4	14.3	30.4	3.3	10.2	1.4	
Montana	253	25.3	11.9	28.9	3.2	29.2	1.6	
Nebraska	221	52.0	10.9	18.1	5.0	13.1	0.9	
Nevada	220	25.5	20.9	25.0	1.8	25.9	0.9	
New Hampshire	166	29.5	18.7	39.8	3.0	4.8	4.2	
New Jersey	866	32.3	28.4	33.0	3.0	2.7	0.6	
New Mexico	467	29.6	23.8	18.4	3.9	22.5	1.1	0.9
New York	1,916	29.5	30.4	31.2	2.9	4.3	1.6	
North Carolina	1,083	38.0	19.9	32.2	2.1	6.6	1.2	
North Dakota	105	37.1	10.5	21.9	1.9	25.7	2.9	
Ohio	1,416	36.2	16.1	36.8	4.3	4.8	1.8	
Oklahoma	720	44.2	12.5	35.4	2.4	4.0	1.5	
Oregon	485	38.6	15.7	24.7	2.9	16.3	1.9	
Pennsylvania	1,544	37.9	17.6	38.1	1.7	3.1	1.2	0.4
Rhode Island	96	27.1	28.1	38.5	2.1	4.2		
South Carolina	739	33.8	22.2	30.7	2.0	9.1	2.2	
South Dakota	147	39.5	12.9	22.4	2.7	19.7	2.7	
Tennessee	919	38.7	11.1	35.6	2.8	10.2	1.5	
Texas	3,328	39.2	17.8	25.7	4.7	11.0	1.6	
Utah	253	32.8	22.9	13.4	5.9	22.5	2.4	
Vermont	87	34.5	11.5	39.1	2.3	9.2	3.4	
Virginia	803	34.4	18.3	35.7	2.4	7.8	1.4	
Washington	628	33.1	16.1	31.4	2.9	15.1	1.4	
West Virginia	379	36.7	11.3	34.3	2.1	14.0	1.6	
Wisconsin	648	39.8	16.4	30.2	2.5	8.3	2.8	
Wyoming	152	26.3	11.8	12.5	7.2	40.8	1.3	
Total	**37,971**	**37.1**	**19.2**	**29.4**	**3.2**	**9.3**	**1.7**	**0.0**

Table IV-3 lists the 1983 fatal accident totals and monthly percentages by state. Large variations in monthly percentages can be expected in states with small numbers of fatal accidents. As in previous years, states in geographical areas with severe weather conditions, had fewer fatal accidents during winter months.

TABLE IV-3
PERCENT OF FATAL ACCIDENTS BY MONTH

State	Total Accidents	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Alabama	896	6.1	5.8	7.3	8.4	10.2	7.8	8.3	7.7	9.6	11.3	8.7	8.8
Alaska	135	5.9	3.7	3.0	4.4	7.4	8.1	17.8	22.2	10.4	6.7	7.4	3.0
Arizona	616	6.7	8.1	8.6	9.7	7.0	4.9	10.2	8.4	9.6	8.1	9.9	8.8
Arkansas	485	6.2	6.2	7.6	7.0	11.3	8.9	8.9	8.2	10.3	7.4	10.3	7.6
California	4,089	6.7	6.6	7.5	8.1	8.8	8.2	9.1	9.9	9.8	8.7	8.0	8.7
Colorado	591	5.8	6.4	5.6	7.3	9.5	7.6	11.5	11.2	12.0	9.0	7.3	6.9
Connecticut	484	5.0	4.0	5.7	8.4	11.1	9.2	13.6	7.2	11.6	8.4	7.4	8.4
Delaware	98	4.1	5.1	7.1	7.1	10.2	13.3	9.2	10.2	11.2	5.1	6.1	11.2
District of Columbia	58	6.9	3.4	12.1	10.3	10.3	3.4	17.2	3.4	6.9	12.1	5.2	8.6
Florida	2,412	7.6	8.5	8.7	8.0	8.0	6.7	8.5	8.7	7.5	9.3	8.6	10.0
Georgia	1,157	6.8	6.9	7.3	7.1	9.3	7.3	9.4	9.9	8.8	9.6	7.9	9.5
Hawaii	133	9.0	6.8	9.8	7.5	11.3	9.0	8.3	7.5	6.0	8.3	9.8	6.8
Idaho	231	5.2	6.1	4.3	4.8	10.4	12.1	10.8	12.6	12.6	8.7	6.5	6.1
Illinois	1,379	7.0	7.3	7.2	6.9	7.3	8.7	10.4	9.6	8.8	10.6	8.8	7.5
Indiana	876	6.8	6.4	10.0	6.3	9.0	9.1	10.3	10.6	8.6	8.9	7.1	6.8
Iowa	437	7.1	5.7	6.4	5.3	9.2	9.2	13.0	11.4	8.7	10.8	5.0	8.2
Kansas	361	5.5	4.2	6.6	6.9	12.2	8.0	11.9	10.5	12.7	8.6	7.2	5.5
Kentucky	690	6.1	5.5	6.2	8.0	8.6	10.4	11.2	8.7	8.6	9.1	9.0	8.7
Louisiana	836	7.9	8.0	6.1	8.9	8.6	7.2	9.1	6.8	8.5	10.4	9.8	8.7
Maine	198	7.6	4.5	6.1	6.6	8.1	8.6	7.1	10.6	12.6	11.1	9.6	7.6
Mississippi	626	6.2	5.8	8.8	9.1	8.1	7.2	9.6	9.4	8.0	10.9	9.3	7.7
Missouri	810	6.7	6.3	6.8	8.3	8.3	8.1	9.3	10.9	10.5	9.3	7.5	8.1
Montana	253	7.5	5.9	5.9	5.1	8.3	9.9	11.1	17.4	12.3	5.1	7.9	3.6
Nebraska	221	7.2	6.3	5.9	6.3	7.2	9.5	14.0	13.6	9.5	10.9	5.4	4.1
Maryland	607	6.3	5.1	6.9	6.8	8.4	7.1	10.7	10.7	9.7	8.7	9.2	10.4
Massachusetts	605	5.8	6.0	7.9	8.3	9.6	10.7	9.3	9.1	9.3	7.8	6.6	9.8
Michigan	1,192	8.1	6.7	6.3	7.0	7.0	9.1	9.4	8.8	10.2	11.4	8.9	7.0
Minnesota	498	4.4	5.2	4.6	7.8	8.2	13.5	9.8	10.4	11.4	10.0	7.0	7.4
Nevada	220	6.8	5.9	7.7	9.1	10.5	11.8	9.1	10.5	9.1	11.8	3.2	4.5
New Hampshire	166	8.4	4.2	4.8	6.0	7.8	7.2	9.0	12.7	9.6	11.4	9.0	9.6
New Jersey	866	6.7	5.8	6.7	7.0	9.5	8.9	8.7	9.7	9.9	9.4	8.4	9.4
New Mexico	467	5.6	4.5	7.1	8.6	9.2	9.2	9.0	10.1	9.2	9.4	9.6	8.8
New York	1,916	7.6	5.2	7.1	7.9	7.5	9.0	9.7	9.5	10.1	8.7	9.1	8.6
North Carolina	1,083	6.4	6.5	8.8	7.3	9.0	8.5	9.3	9.6	9.2	8.8	7.1	9.5
North Dakota	105	4.8	3.8	1.0	10.5	10.5	11.4	9.5	12.4	8.6	13.3	9.5	4.8
Ohio	1,416	6.1	6.2	6.0	5.4	8.5	10.0	10.3	10.1	10.0	8.8	8.4	10.0
Oklahoma	720	8.7	6.3	7.5	8.7	9.7	7.1	10.6	8.1	10.1	9.2	5.6	8.5
Oregon	485	4.5	6.8	7.8	7.0	9.1	8.5	10.1	10.7	8.2	9.9	9.3	8.0
Pennsylvania	1,544	7.0	5.2	6.7	7.3	8.9	9.7	8.6	10.3	8.9	9.0	8.8	9.6
Rhode Island	96	8.3	5.2	3.1	6.3	7.3	6.3	15.6	8.3	11.5	9.4	7.3	11.5
South Carolina	739	7.2	6.1	6.1	6.9	9.9	10.3	8.3	10.1	10.0	9.2	7.6	8.4
South Dakota	147	4.8	5.4	7.5	5.4	11.6	10.2	12.2	10.2	12.9	6.1	10.2	3.4
Tennessee	919	5.7	7.5	7.8	7.1	7.6	8.9	9.9	9.6	9.4	9.1	7.7	9.7
Texas	3,328	7.1	6.8	7.5	8.7	8.3	8.6	9.8	8.8	8.6	9.4	9.2	7.5
Utah	253	8.7	6.3	7.9	5.9	7.1	10.7	11.1	11.1	10.3	8.3	8.3	4.3
Vermont	87	6.9	3.4	9.2	5.7	5.7	12.6	8.0	11.5	6.9	12.6	6.9	10.3
Virginia	803	6.4	6.0	6.1	8.2	8.2	8.5	7.7	9.6	10.8	11.5	8.3	8.7
Washington	628	6.8	4.8	6.4	10.0	7.2	9.4	11.0	9.1	9.1	9.4	8.9	8.0
West Virginia	379	6.6	7.1	7.1	7.1	5.5	10.6	12.1	11.1	9.8	8.2	6.9	7.9
Wisconsin	648	6.8	3.1	6.3	5.9	8.0	10.3	11.9	12.3	11.4	9.1	9.0	5.9
Wyoming	152	5.9	4.6	5.9	6.6	3.3	7.9	15.8	17.8	8.6	12.5	5.9	5.3
Total	37,971	6.8	6.3	7.2	7.6	8.5	8.7	9.8	9.7	9.5	9.3	8.3	8.3

Some of the variations in percentages of fatalities by functional class of roadway (Table IV-4) are probably the result of different proportions of road mileage among the states. Nationally, more than two of every five fatal accidents occurred on arterial routes other than the Interstate System and Other Freeways and Expressways. These roadways, plus collector roads and local streets, accounted for more than four of every five fatalities (86.4 percent). Despite the nationwide decline in fatalities from 1982 to 1983, minor increases in the percent of fatalities occurred on Interstate, collector and local highways.

TABLE IV-4
PERCENT OF FATALITIES BY ROADWAY FUNCTION CLASS

State	Total Fatalities	Interstate	Other Freeway & Expressway	Other Principal Arterial	Minor Arterial	Collector	Local	Unknown
Alabama	930	6.3		24.3		27.7	41.6	
Alaska	150	4.0	4.7	9.3	22.0	25.3	18.7	6.0
Arizona	675	14.8	0.1	18.7	29.9	17.5	19.0	
Arkansas	557	11.7	1.6	25.5	15.6	22.8	22.8	
California	4,573	9.4	6.0	31.6	26.0	17.6	9.5	
Colorado	646	14.9	2.5	28.3	19.7	26.2	8.0	
Connecticut	438	18.7	4.1	26.0	17.8	20.1	12.6	0.7
Delaware	110	6.4		50.0	10.9	18.2	14.5	
District of Columbia	66	9.1	15.2	24.2	33.3	6.1	12.1	
Florida	2,683	7.3	19.3	28.5	1.0	11.5	31.5	0.8
Georgia	1,296	8.5		18.1	25.2	17.8	30.4	
Hawaii	141	6.4	9.2	17.7	36.2	19.1	11.3	
Idaho	263	9.9		32.7	14.1	24.0	19.4	
Illinois	1,526	7.8	0.5	13.2	41.3	20.7	16.5	
Indiana	1,016	9.5	1.6	22.2	26.1	23.6	16.9	
Iowa	514	8.0		27.8	5.5	26.7	12.1	
Kansas	411	6.3	2.7	31.4	19.5	18.5	21.7	
Kentucky	778	8.9	0.3	15.7	19.4	43.4	12.3	
Louisiana	933	7.8	0.1	15.4	31.0	31.5	12.2	1.9
Maine	224	6.7	1.8	22.3	14.7	32.6	17.4	4.5
Maryland	656	9.3	2.7	27.3	24.2	22.1	11.7	2.6
Massachusetts *	651	8.9	9.1	19.5		49.6	12.9	
Michigan	1,314	5.9	1.5	25.9	24.5	26.0	16.1	0.2
Minnesota	555	4.3	0.4	24.1	27.6	31.2	12.4	
Mississippi	715	6.9	0.1	18.0	25.3	18.9	30.2	0.6
Missouri	911	13.7	0.3	35.1	1.0	34.0	15.8	
Montana	286	16.1		30.4	21.3	19.6	12.6	
Nebraska	255	7.8		33.7	22.4	14.9	21.2	
Nevada	253	22.5	5.5	20.9	20.6	18.6	11.9	
New Hampshire	191	5.8	3.7	10.5	15.7	20.9	16.2	27.2
New Jersey	932	4.8	4.8	30.3	29.9	17.7	12.4	
New Mexico	531	15.8	0.2	22.4	25.4	17.1	19.0	
New York	2,075	6.3	6.6	25.7	27.8	19.3	14.3	0.0
North Carolina	1,234	6.2	1.3	21.6	12.6	35.7	22.4	
North Dakota	116	5.2		20.7	26.7	37.1	10.3	
Ohio	1,582	9.1	2.0	17.7	22.3	27.9	21.0	
Oklahoma	848	11.9	1.7	15.7	26.8	33.8	8.3	1.9
Oregon	550	8.5	0.2	46.0	7.8	24.4	13.1	
Pennsylvania	1,721	6.6	2.6	27.4	26.1	18.2	17.9	1.3
Rhode Island	100	14.0	14.0	16.0	27.0	19.0	10.0	
South Carolina	844	7.5		43.0	0.5	30.7	18.4	
South Dakota	175	11.4		32.6	17.1	18.3	20.6	
Tennessee	1,037	10.9	0.6	23.5	24.3	22.2	18.5	
Texas	3,823	15.3	5.5	25.5	17.5	22.2	14.0	
Utah	283	20.5	1.4	9.2	20.1	8.1	40.3	0.4
Vermont	94	4.3	2.1	27.7	18.1	33.0	14.9	
Virginia	901	9.4	3.3	21.3	25.9	23.2	16.9	
Washington	698	10.0		26.2	22.3	25.6	15.8	
West Virginia	425	6.1		19.8	28.2	34.8	11.1	
Wisconsin	725	3.6		28.6	27.6	21.7	18.6	
Wyoming	173	25.4		21.4	19.1	27.2	6.9	
Total	**42,584**	**9.5**	**3.7**	**25.1**	**20.8**	**23.1**	**17.4**	**0.4**

TABLE IV-5
ACCIDENT RATES PER LICENSED DRIVER, PER SQUARE MILE, AND PER VMT

State	Total Fatalities	Licensed Drivers	Fatalities per 100,000 Drivers	Land Area (Square Mi.)	Fatalities per 1,000 Square Mi.	1983 VMT (Millions)	Fatalities Per 100 Million VMT (1983)
Alabama	930	2,393,878	38.8	51,609	18.0	31,032	3.0
Alaska	150	288,739	52.0	586,412	0.3	3,358	4.5
Arizona	675	2,178,815	31.0	113,909	5.9	19,611	3.4
Arkansas	557	1,649,567	33.8	53,104	10.5	16,684	3.3
California	4,573	16,648,518	27.5	158,693	28.8	182,652	2.5
Colorado	646	2,229,042	29.0	104,247	6.2	24,109	2.7
Connecticut	438	2,249,525	19.5	5,009	87.4	20,630	2.1
Delaware	110	432,029	25.5	2,057	53.5	4,886	2.3
District of Columbia	66	370,196	17.8	67	985.1	3,099	2.1
Florida	2,683	8,347,269	32.1	58,560	45.8	81,776	3.3
Georgia	1,296	3,725,127	34.8	58,876	22.0	48,837	2.7
Hawaii	141	575,013	24.5	6,450	21.9	5,873	2.4
Idaho	263	648,108	40.6	83,557	3.1	8,287	3.2
Illinois	1,526	6,984,733	21.8	56,400	27.1	67,370	2.3
Indiana	1,016	3,550,785	28.6	36,291	28.0	39,837	2.6
Iowa	514	1,928,799	26.6	56,290	9.1	19,661	2.6
Kansas	411	1,681,197	24.4	82,264	5.0	18,153	2.3
Kentucky	778	2,192,567	35.5	40,395	19.3	26,719	2.9
Louisiana	933	2,767,356	33.7	48,523	19.2	27,573	3.4
Maine	224	770,240	29.1	33,215	6.7	7,924	2.8
Maryland	656	2,799,441	23.4	10,577	62.0	30,618	2.1
Massachusetts	651	3,678,678	17.7	8,257	78.8	37,541	1.7
Michigan	1,314	6,344,657	20.7 ?	58,216	22.6	60,855	2.2
Minnesota	555	2,373,908	23.4	84,068	6.6	31,063	1.8
Mississippi	715	1,802,952	39.7	47,716	15.0	17,802	4.0
Missouri	911	3,322,500	27.4	69,686	13.1	36,543	2.5
Montana	286	488,603	58.5	147,138	3.3	7,181	4.0
Nebraska	255	1,094,680	23.3	77,227	3.3	11,534	2.2
Nevada	253	676,074	37.4	110,540	2.3	6,872	3.7
New Hampshire	191	697,012	27.4	9,304	20.5	7,181	2.7
New Jersey	932	5,458,667	17.1	7,836	118.9	52,217	1.8
New York	2,075	9,605,780	21.6	49,756	41.7	83,783	2.5
North Carolina	1,234	3,966,351	31.1	52,586	23.5	45,038	2.7
North Dakota	116	431,740	26.9	70,665	1.6	5,363	2.2
Ohio	1,582	7,397,289	21.4	41,222	38.4	73,214	2.2
Oklahoma	848	2,174,350	39.0	69,919	12.1	29,565	2.9
Oregon	550	1,900,674	28.9	96,981	5.7	20,557	2.7
Pennsylvania	1,721	7,442,842	23.1	45,333	38.0	72,302	2.4
Rhode Island	100	603,176	16.6	1,214	82.4	6,014	1.7
South Carolina	844	2,007,683	42.0	31,055	27.2	24,977	3.4
South Dakota	175	482,439	36.3	77,047	2.3	6,317	2.8
Tennessee	1,037	2,933,197	35.4	42,244	24.5	36,261	2.9
Texas	3,823	11,406,433	33.5	267,339	14.3	131,883	2.9
Utah	283	926,434	30.5	84,916	3.3	11,221	2.5
Vermont	94	360,642	26.1	9,609	9.8	4,151	2.3
Virginia	901	3,704,171	24.3	40,817	22.1	42,299	2.1
Washington	698	2,867,032	24.3	68,192	10.2	36,144	1.9
West Virginia	425	1,417,000	30.0	24,181	17.6	11,696	3.6
Wisconsin	725	3,085,549	23.5	56,154	12.9	34,106	2.1
Wyoming	173	394,041	43.9	97,914	1.8	5,059	3.4
Total	42,584	154,221,003	27.6	3,615,303	11.8	1,649,106	2.6

TABLE IV-6
PERCENT OF OCCUPANT FATALITIES BY VEHICLE TYPE
1983

State	Total Occupant Fatalities	Passenger Cars	Motor-cycles	Other Motorized Cycles	Light Trucks	Medium Trucks	Heavy Trucks	Buses	Special Vehicles	Unknown
Alabama	807	70.6	7.2		16.2	0.6	2.6		2.6	0.1
Alaska	126	44.4	10.3	0.8	27.8		1.6		15.1	
Arizona	541	51.9	18.7	0.4	21.3	0.6	2.6	0.2	3.5	0.9
Arkansas	497	56.9	8.9	0.6	24.1	0.4	3.2	1.8	3.8	0.2
California	3,612	62.0	17.9	0.5	14.6	0.5	1.5	0.1	2.5	0.3
Colorado	548	54.7	12.6		21.5	0.5	3.5		7.1	
Connecticut	368	64.9	22.6	0.3	6.8	1.1	1.4		2.4	0.5
Delaware	90	72.2	11.1		15.6				1.1	
District of Columbia	43	76.7	7.0	9.3	4.7				2.3	
Florida	1,979	71.8	11.7	0.3	11.9	0.1	1.7	0.1	0.7	1.8
Georgia	1,078	70.9	7.7	0.6	14.8	1.5	1.7	0.1	2.6	0.1
Hawaii	112	67.0	16.1	2.7	7.1				7.1	
Idaho	233	51.1	10.3		30.0	0.9	5.6		2.1	
Illinois	1,237	70.6	14.4	0.2	9.5	0.5	1.7	0.1	2.8	0.2
Indiana	900	67.9	11.2	0.3	13.4	0.6	3.3	0.1	2.9	0.2
Iowa	476	61.3	11.3	1.3	15.3	0.2	3.4		7.1	
Kansas	378	62.7	11.1		17.7	1.6	2.4		4.2	0.3
Kentucky	681	67.7	6.8	0.4	17.5	0.3	2.8	0.3	4.3	
Louisiana	754	59.8	11.4	0.7	22.4	0.8	2.1	0.1	2.7	
Maine	197	68.5	13.7	1.5	13.2		0.5		2.5	
Maryland	511	71.6	12.3	0.6	10.4	0.2	2.7		1.8	0.4
Massachusetts	489	73.2	14.1	1.2	7.8		0.6		1.4	1.6
Michigan	1,033	71.3	9.8	1.2	12.5	0.1	1.2	0.1	3.4	0.5
Minnesota	480	67.5	13.7	1.7	11.5	0.2	2.1		3.3	
Mississippi	613	64.3	6.7	0.3	20.9	0.7	2.1		1.5	3.6
Missouri	782	66.5	7.9	0.1	18.0	0.4	3.8		3.2	
Montana	255	50.2	9.4		29.0	0.8	3.9		6.3	0.4
Nebraska	228	64.9	11.4		17.5	0.4	3.1		2.6	
Nevada	205	62.4	8.3	1.0	22.4		1.0		2.9	2.0
New Hampshire	160	73.1	11.2	0.6	8.7		1.2		4.4	0.6
New Jersey	670	79.6	10.7	0.6	6.4	0.1	1.2		1.2	0.1
New Mexico	410	49.8	13.2	0.5	24.9	0.2	5.4		4.9	1.2
New York	1,457	73.3	13.9	0.3	6.9	0.3	2.1	0.8	2.3	0.1
North Carolina	1,013	75.6	5.7	0.8	12.5		2.5	0.2	2.5	0.2
North Dakota	105	55.2	13.3	1.0	21.0		1.9		7.6	
Ohio	1,333	70.2	13.5	0.5	11.1	0.5	1.5	0.1	2.5	0.1
Oklahoma	755	61.1	8.5		23.7	0.5	3.6		2.6	
Oregon	468	58.3	11.8	0.2	22.4	0.4	3.0		3.8	
Pennsylvania	1,430	72.9	10.1	0.3	9.0	0.6	3.2		3.6	0.2
Rhode Island	72	65.3	27.8		4.2				2.8	
South Carolina	675	70.1	11.7	1.0	12.0	2.1	1.2		1.9	
South Dakota	154	54.5	7.8		26.0		3.2		6.5	1.9
Tennessee	923	70.0	8.6	0.7	13.3	0.2	2.8	0.1	4.0	0.3
Texas	3,165	59.0	11.0	0.0	23.6	0.4	2.8	0.5	2.5	0.1
Utah	219	53.4	12.8		22.8		5.0		5.9	
Vermont	82	75.6	6.1		7.3	1.2	1.2		3.7	4.9
Virginia	750	67.3	8.7	0.4	17.2		2.7		3.2	0.5
Washington	596	64.9	12.8	0.2	15.4		1.5		4.7	0.5
West Virginia	380	63.9	7.6		19.7	0.3	3.7		4.7	
Wisconsin	616	66.7	15.6	1.1	9.7	1.9	0.8		4.1	
Wyoming	154	41.6	9.7	0.6	29.9	1.3	6.5		10.4	
Total	34,840	65.9	11.8	0.5	15.4	0.5	2.3	0.2	3.0	0.4

PUERTO RICO

Fatal accidents in Puerto Rico are treated separately in this report to conform to the practice of other national data systems. The figures and tables in this chapter show that the pattern of fatal accidents in Puerto Rico differs from the national pattern in some respects.

- 436 fatal accidents occurred in Puerto Rico in 1983, an increase of 8 percent from 1982 (Figure IV-2).
- 514 people were killed in 1983 (up 7 percent from 1982). The percentage of nonoccupant fatalities remained at its 1982 level, slightly less than half of the total.
- Seventy-nine percent of all fatal victims were males. They greatly outnumbered females in all age groups except for those under 15 where they were evenly divided (Figure IV-3).

FIGURE IV-2
FATALITIES AND FATAL ACCIDENTS FOR 1978-1983
(Puerto Rico)

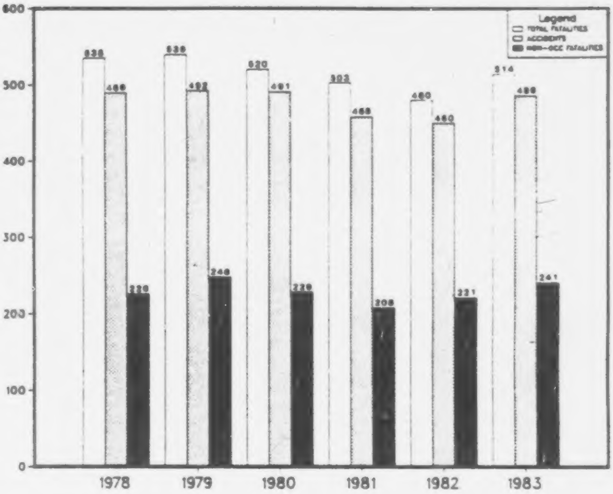
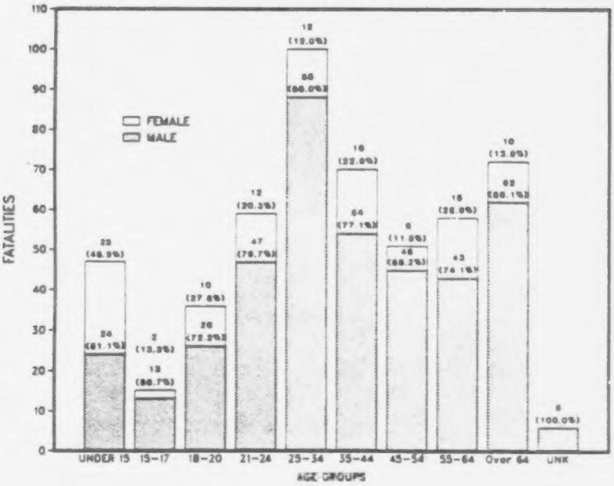


FIGURE IV-3
FATALITIES BY AGE AND SEX
(Puerto Rico)
(514)



- Sixty-eight percent of the vehicles involved in fatal accidents were passenger cars, a slightly lower proportion than the previous year (73.3 percent). The next largest group was light trucks (Table IV-7).
- Twenty-six percent of the involved vehicle occupants were killed compared to 32 percent in 1982.
- About 75 percent of the fatally injured drivers are tested for alcohol in Puerto Rico, a rate that has significantly increased over the previous three years (Table IV-8). Any BAC testing rate above 80-85 percent is considered to be a fairly complete, unbiased sample. Of the fatally injured drivers who were tested for alcohol, 41 percent were legally intoxicated (Table IV-9).
- Most drivers held valid driver's licenses (Table IV-10).

TABLE IV-7
INVOLVED VEHICLES, OCCUPANTS AND OCCUPANT FATALITIES BY BODY TYPE
(Puerto Rico)

	Vehicles		Occupants		Occupant Fatalities	
	Number	Percent	Number	Percent	Number	Percent
Passenger Cars	433	68.3	717	68.6	195	71.4
Motorcycles	28	4.4	33	3.2	27	9.9
Other Motorized Cycles	1	0.2	1	0.1	1	0.4
Light Trucks	59	9.3	106	10.1	23	8.4
Medium Trucks	4	0.6	4	0.4	1	0.4
Heavy Trucks	9	1.4	10	1.0	1	0.4
Buses	4	0.6	56	5.4	1	0.4
Special Vehicles	28	4.4	49	4.7	22	8.1
Unknown	68	10.7	69	6.6	2	0.7
Total	**634**	**100.0**	**1045**	**100.0**	**273**	**100.0**

TABLE IV-8
FATALLY INJURED DRIVERS TESTED FOR ALCOHOL INVOLVEMENT
(Puerto Rico)

	Fatally Injured Drivers	Tested for Alcohol	
		Number	Percent
1980	183	115	62.8
1981	181	101	55.8
1982	162	94	58.0
1983	166	127	76.5

TABLE IV-9
PERCENT OF TESTED FATALLY INJURED DRIVERS BY BLOOD ALCOHOL CONTENT
(Puerto Rico)

	Blood Alcohol Content		
	None	0.01-0.09%	0.10% or more
1980	48	7	45
1981	44	8	48
1982	38	11	52
1983	40	19	41

TABLE IV-10
DRIVERS BY AGE, DRINKING INVOLVEMENT, LICENSE STATUS
(Puerto Rico)
(633)

	15 to 17		18 to 20		21 to 24		25 to 34		35 to 44		45 to 54		55 to 64		Over 64		Unknown	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Not Drinking	8	1.7	39	8.5	54	11.8	137	29.9	79	17.2	45	9.8	21	4.6	13	2.8	62	13.5
Invalid License	3	5.9	7	13.7	10	19.6	18	35.3	10	19.6	2	3.9					1	2.0
Valid License	5	1.4	32	9.2	44	12.7	118	34.0	69	19.9	43	12.4	21	6.1	13	3.7	2	0.6
Unknown							1	1.7									59	98.3
Drinking Involved	3	1.7	13	7.4	32	18.3	61	34.9	30	17.1	22	12.6	9	5.1	4	2.3	1	0.6
Invalid License	1	2.5	3	7.5	10	25.0	10	25.0	12	30.0	4	10.0						
Valid License	2	1.5	10	7.4	22	16.3	51	37.8	18	13.3	18	13.3	9	6.7	4	3.0	1	0.7
Total	11	1.7	52	8.2	86	13.6	198	31.3	109	17.2	67	10.6	30	4.7	17	2.7	63	10.0

Nonoccupant fatalities were up 9 percent from 221 in 1982 to 241 in 1983. As in the rest of the country, most of these occurred on the roadway and away from intersections (Table IV-11).

TABLE IV-11
NONOCCUPANT FATALITIES BY LOCATION
(Puerto Rico)
(241)

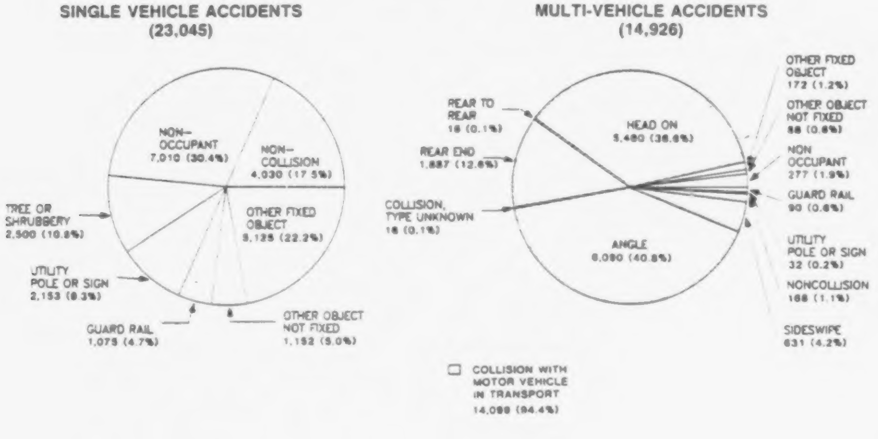
	Pedestrian		Pedalcyclist		Other Nonoccupant		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Intersection	26	100.0	2	100.0			28	100.0
In Crosswalk	6	23.1					6	21.4
On Roadway	20	76.9	2	100.0			22	78.6
Non-Intersection	100	100.0	8	100.0	1	100.0	109	100.0
In Crosswalk	5	5.0					5	4.6
On Roadway	54	54.0	6	75.0			60	55.0
Other & Unknown	41	41.0	2	25.0	1	100.0	44	40.4
Unknown	95	100.0	8	100.0	1	100.0	104	100.0
On Roadway	80	84.2	8	100.0	1	100.0	89	85.6
Other & Unknown	3	3.2					3	2.9
Unknown	12	12.6					12	11.5
Total	221	100.0	18	100.0	2	100.0	241	100.0

V. Accidents

About 60 percent of all fatal accidents involved only one vehicle. Overall, the first harmful event in almost half (47.1 percent) of these single vehicle accidents was collision with a fixed object. The second most frequent was collision with a nonoccupant (Figure V-1). Nonoccupants include pedestrians, pedalcyclists and others not in or on a motor vehicle in transport. The majority of these were pedestrians.

In almost all multiple-vehicle accidents, the first harmful event reported was collision of two or more motor vehicles in transport (94.4 percent) (Figure V-1). Angle impacts constituted the most frequent manner in which these accidents occurred, followed by head-on collisions.

FIGURE V-1
DISTRIBUTION OF FATAL ACCIDENTS BY
FIRST HARMFUL EVENT
(37,971)

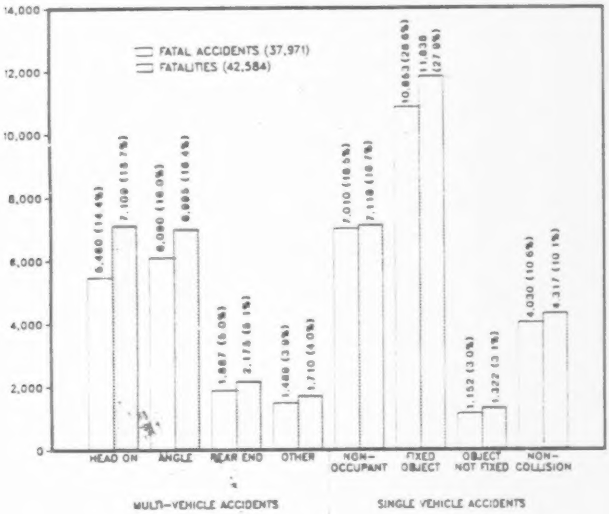


COLLISIONS

Figure V-2 shows the distribution of fatal accidents and fatalities among types of collisions.

- The majority of fatal accidents were single vehicle accidents. More fatalities occurred in this type of accident than in multi-vehicle accidents.
- Angle and head-on collisions combined accounted for 33.1 percent of all deaths.

FIGURE V-2
FATAL ACCIDENTS AND NUMBER OF FATALITIES BY FIRST HARMFUL EVENT



Of the 14,926 fatal multiple vehicle accidents, 88.7 percent (13,236) were two-vehicle collisions. Collisions of two passenger cars comprised the single largest group of two vehicle accidents, accounting for one-third (33.8 percent) of the total. The next largest group was collisions of passenger cars with light trucks (20.4 percent). In fact, passenger cars were involved in 83.4 percent of the two-vehicle collisions (Table V-1).

TABLE V-1
FATAL ACCIDENTS AND OCCUPANT FATALITIES BY VEHICLE MIX IN TWO-VEHICLE ACCIDENTS
1983

Body Type of Vehicle 1	Body Type of Vehicle 2	Accidents	Occupant Fatalities*			
			Vehicle 1		Vehicle 2**	
			Number	Percent	Number	Percent
Passenger Car	Passenger Car	4,473	5,397	100.0	n/a	- -
Passenger Car	Motorcycle	1,198	40	3.2	1,225	96.8
Passenger Car	Other Motorized Cycle	57	1	1.7	59	98.3
Passenger Car	Light Truck	2,693	2,454	77.4	717	22.6
Passenger Car	Medium Truck	255	315	97.5	8	2.5
Passenger Car	Heavy Truck	1,772	2,117	97.5	54	2.5
Passenger Car	Bus	89	101	98.1	2	1.9
Passenger Car	Special Vehicle	359	292	69.2	130	30.8
Passenger Car	Unknown	148	193	93.7	13	6.3
Motorcycle	Motorcycle	61	69	100.0	n/a	- -
Motorcycle	Other Motorized Cycle	4	1	20.0	4	80.0
Motorcycle	Light Truck	458	480	99.6	2	0.4
Motorcycle	Medium Truck	38	42	100.0	0	0.0
Motorcycle	Heavy Truck	122	127	100.0	0	0.0
Motorcycle	Bus	21	22	100.0	0	0.0
Motorcycle	Special Vehicle	59	59	93.7	4	6.3
Motorcycle	Unknown	64	26	100.0	0	0.0
Other Motorized Cycle	Other Motorized Cycle	1	1	100.0	n/a	- -
Other Motorized Cycle	Light Truck	32	33	100.0	0	0.0
Other Motorized Cycle	Medium Truck	4	4	100.0	0	0.0
Other Motorized Cycle	Heavy Truck	3	3	100.0	0	0.0
Other Motorized Cycle	Bus	0	0	100.0	0	0.0
Other Motorized Cycle	Special Vehicle	2	2	100.0	0	0.0
Other Motorized Cycle	Unknown	1	1	100.0	0	0.0
Light Truck	Light Truck	366	421	100.0	n/a	- -
Light Truck	Medium Truck	62	63	91.3	6	8.7
Light Truck	Heavy Truck	545	614	94.8	34	5.2
Light Truck	Bus	13	16	100.0	0	0.0
Light Truck	Special Vehicle	87	40	39.2	62	60.8
Light Truck	Unknown	37	23	60.5	15	29.5
Medium Truck	Medium Truck	4	5	100.0	n/a	- -
Medium Truck	Heavy Truck	23	14	63.6	8	26.4
Medium Truck	Bus	0	0	- -	0	- -
Medium Truck	Special Vehicle	6	0	0.0	6	100.0
Medium Truck	Unknown	3	1	33.3	2	66.7
Heavy Truck	Heavy Truck	106	120	100.0	n/a	- -
Heavy Truck	Bus	8	4	16.0	21	84.0
Heavy Truck	Special Vehicle	65	5	6.8	69	93.2
Heavy Truck	Unknown	8	2	16.7	10	83.3
Bus	Bus	1	3	100.0	n/a	- -
Bus	Special Vehicle	4	0	0.0	3	100.0
Special Vehicle	Special Vehicle	12	13	100.0	n/a	- -
Special Vehicle	Unknown	2	2	100.0	0	0.0
Unknown	Unknown	10	4	100.0	n/a	- -

Note: There were two accidents involving two vehicles which had no occupant fatalities.

*Percent of all fatalities occurring in this type of accident which occur to occupants of this vehicle body type.

**If Vehicle No.2 is same body type as Vehicle No.1 - all fatalities are included under Vehicle No.1.

As a rule of thumb in two-vehicle collisions, fatalities were most frequent for occupants of the smaller of the two vehicles. Two-vehicle fatal accidents that involved motorcycles resulted in the rider's death 98.8 percent of the time. That figure rises to virtually 100 percent if motorcycle accidents with "other motorized cycles" are ignored. Fatal collisions of a truck with another vehicle more often resulted in the death of an occupant of the other vehicle than of a truck occupant.

In the 2,546 two-vehicle fatal accidents involving heavy trucks with other types of vehicles, 96 percent of the 3,082 fatalities occurred in the other vehicles. Total fatalities in this type of accident increased six percent from 1982.

HIGHWAY AND ENVIRONMENT

An important element of fatal accidents is the environment in which they occur--the type of roadway, light and weather conditions, and the type of object with which the vehicle collides.

Almost two-thirds (64 percent) of all fatal accidents occurred on straight, level highways. One in four (26.4 percent) fatal accidents occurred on a curve (Figure V-3).

As in previous years, slightly more than half (57.5 percent) of the 1983 estimated vehicle miles of travel (VMT) were in urban areas. In urban areas 1.8 fatal accidents occurred for each 100 million VMT. In rural areas the rate was almost two-thirds higher--3.0 accidents per 100 million VMT (Figure V-4). The rate of fatalities per fatal accident is almost 6 percent higher in rural areas than in urban areas. Urban travel increased from 1982 by 5.2 percent while urban deaths decreased by 3.5 percent. Rural travel increased 1.4 percent while fatalities in rural areas decreased 2.1 percent.

FIGURE V-3
FATAL ACCIDENTS BY ROADWAY ALIGNMENT AND PROFILE
(37,971)

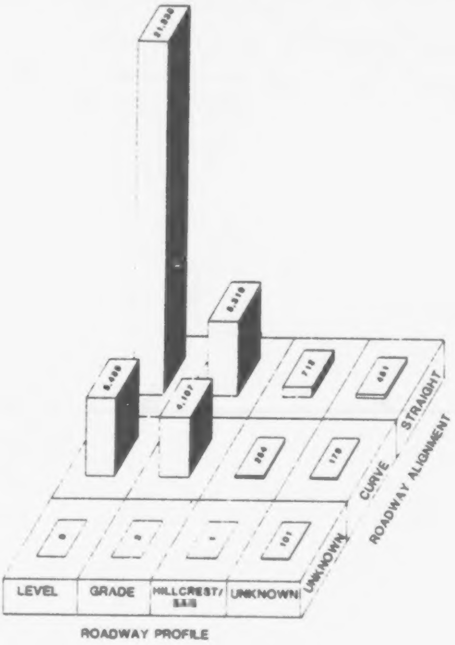
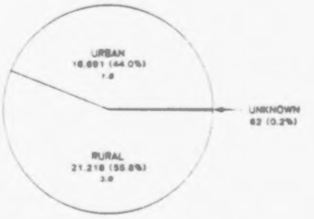


FIGURE V-4
FATAL ACCIDENTS AND ACCIDENT RATES
BY LAND USE
(37,971)

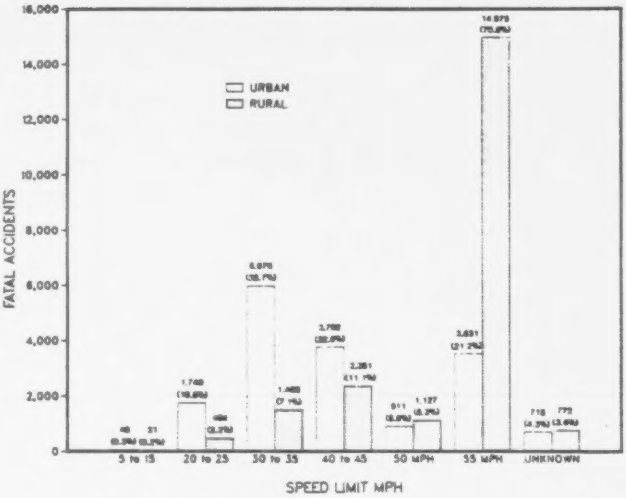


Note: n.n Fatal Accidents per 100 million VMT

Fatal accidents occurred more frequently on roadways with a 55 mph speed limit than on any other set of roadways (Figure V-5). The percentage of these accidents (48.7 percent) was almost three times that of the next highest, those in 30 and 35 mph zones. Not surprisingly, rural areas dominated the frequency of accidents on roadways with a 55 mph speed limit and urban areas dominated the death toll on roadways with speed limits less than 50 mph.

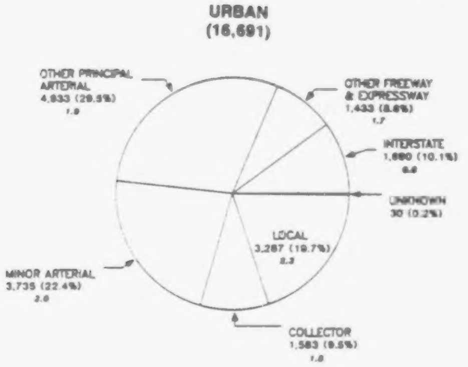
Figure V-6 shows the distributions of accidents in urban and rural areas among functional classes of roadway. The largest differences between urban and rural areas were on collector roads: Rural collector roads had a fatal accident rate twice that of urban collector roads. However, the rural collector system is much more extensive, accounting for almost 23 percent of total rural mileage. Urban collectors comprise only about 11 percent of the urban mileage. Interstate highways in both areas had the lowest fatality rates.

FIGURE V-5
FATAL ACCIDENTS BY SPEED LIMIT AND LAND USE
(37,971)



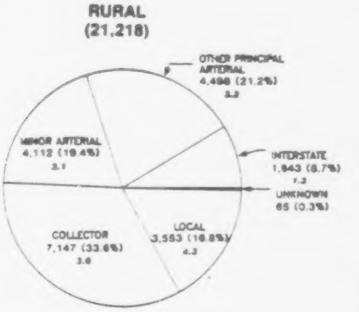
NOTE: 62 FATAL ACCIDENTS WHERE LAND USE WAS UNKNOWN.

FIGURE V-6
FATAL ACCIDENTS AND ACCIDENT RATES
BY ROADWAY FUNCTION CLASS
(37,909)



Note: a.a = Fatal Accidents per 100 million VMT

Note: 62 Fatal Accidents with Unknown Land Use Not Included in Figure



Note: a.a = Fatal Accidents per 100 million VMT

Although Interstate highways had the lowest fatality rate, the numbers of vehicles involved in fatal accidents on the Interstate System did not decrease from 1982 to 1983 (Table V-2). Fatal accidents involving heavy trucks increased by 134. If heavy trucks are ignored, vehicle involvement on the Interstate System would have decreased by 2.3 percent, approximately the decrease on all highways. On the Interstate one out of every five vehicles involved in a fatal accident was a heavy truck. The frequency of heavy truck involvement in fatal accidents on the Interstate System is more than three times that on the remaining highways combined. Forty-six percent of all combination truck travel during 1983 occurred on the Interstate System.

Automobiles accounted for more than half of the involved vehicles on any of the six types of highways. On all but the Interstate, light trucks were the second most frequently involved. On local roads one out of ten vehicles involved in fatal crashes was a motorcycle.

A total of 531 fatal accidents occurred in and around construction and roadway maintenance zones, up from 437 in 1982. Table V-3 distributes these accidents by functional class of roadway. Fatal accidents in construction zones on Interstate highways were 27.9 percent higher than the previous year.

TABLE V-2
VEHICLE TYPES INVOLVED IN FATAL ACCIDENTS BY ROADWAY FUNCTION CLASS
(55,099)

	Interstate		Other Freeway & Expressway		Other Principal Arterial		Minor Arterial		Collector		Local		Unknown	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Passenger Cars	2,908	55.3	1,446	65.6	9,240	61.5	7,320	61.9	7,197	60.0	5,056	58.8	121	59.0
Motorcycles	198	3.8	144	6.5	930	6.2	874	7.4	1,007	8.4	975	11.3	13	6.3
Other Motorized Cycles	1	0.0	2	0.1	28	0.2	23	0.2	34	0.3	69	0.8	3	1.5
Light Trucks	796	15.1	325	14.7	2,564	17.1	2,072	17.5	2,485	20.7	1,596	18.6	32	15.6
Medium Trucks	75	1.4	18	0.8	146	1.0	153	1.3	153	1.3	115	1.3	4	2.0
Heavy Trucks	1,018	19.4	140	6.3	1,444	9.6	815	6.9	535	4.5	205	2.4	17	8.3
Buses	23	0.4	13	0.6	95	0.6	70	0.6	48	0.4	56	0.7	1	0.5
Special Vehicles	126	2.4	35	1.6	301	2.0	318	2.7	382	3.2	355	4.1	6	2.9
Unknown	113	2.1	82	3.7	269	1.8	176	1.5	152	1.3	173	2.0	8	3.9
Total	5,258	100.0	2,205	100.0	15,017	100.0	11,821	100.0	11,993	100.0	8,600	100.0	205	100.0

TABLE V-3
FATAL ACCIDENTS IN CONSTRUCTION MAINTENANCE ZONES BY FUNCTIONAL CLASSIFICATION
(531)

	Construction Zone	Maintenance Zone	Utility Zone	Unknown Work Zone	Total
Interstate	101	20		19	140
Other Freeway & Expressway	19	5		7	31
Other Principal Arterial	97	16	1	28	142
Minor Arterial	70	9	1	15	95
Collector	42	9	4	11	66
Local	37	6	4	7	54
Unknown	2	1			3
Total	368	66	10	87	531

Most accidents occurred on the roadway away from junctions (Table V-4). Not surprisingly, fatal junction accidents were more common in urban areas than they were in rural areas. In urban areas, intersections with no control devices had the highest frequency of fatal accidents, followed by those controlled by traffic lights. In rural areas most intersection fatalities occurred where there were stop signs, followed by intersections that had no control devices (Table V-5).

TABLE V-4
FATAL ACCIDENT ENVIRONMENT
(37,971)

	On Roadway		Shoulder		Median		Roadside		Parking Lane		Other		Unknown	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Urban														
Non-Junction	6,280	55.3	738	87.1	456	84.6	1,850	82.8	63	95.5	1,348	82.6	17	81.0
Junction	4,419	38.9	85	10.0	81	15.0	347	15.5	3	4.5	260	15.9	3	14.3
Driveway, Alley Access	516	4.5	21	2.5			34	1.5			23	1.4	1	4.8
Rail Grade Crossing	129	1.1	3	0.4	1	0.2	3	0.1						
Unknown	8	0.1			1	0.2	1	0.0						
Subtotal	**11,352**	**100.0**	**847**	**100.0**	**539**	**100.0**	**2,235**	**100.0**	**66**	**100.0**	**1,631**	**100.0**	**21**	**100.0**
Rural														
Non-Junction	8,088	70.0	972	95.9	372	92.8	4,322	93.2	6	100.0	3,287	91.9	20	71.4
Junction	2,638	22.8	27	2.7	24	6.0	233	5.0			238	6.7		
Driveway, Alley Access	542	4.7	15	1.5	1	0.2	76	1.6			48	1.3		
Rail Grade Crossing	272	2.4					7	0.2			2	0.1		
Unknown	16	0.1			4	1.0							8	28.6
Subtotal	**11,556**	**100.0**	**1,014**	**100.0**	**401**	**100.0**	**4,638**	**100.0**	**6**	**100.0**	**3,575**	**100.0**	**28**	**100.0**
Unknown Land Use*	**41**	**100.0**	**3**	**100.0**			**6**	**100.0**			**12**	**100.0**		
Total	**22,949**	**100.0**	**1,864**	**100.0**	**940**	**100.0**	**6,879**	**100.0**	**72**	**100.0**	**5,218**	**100.0**	**49**	**100.0**

* 1 Railroad Grade Crossing in Unknown Land Use.

TABLE V-5
FATAL ACCIDENTS AT ROAD JUNCTIONS BY LAND USE AND INTERSECTION TRAFFIC CONTROLS
(8,373)

	Urban		Rural		Unknown		Total	
	Number	%	Number	%	Number	%	Number	%
No Controls	1,980	38.1	1,252	39.6	7	46.7	3,239	38.7
On Color Traffic Signal	1,797	34.6	200	6.3	3	20.0	2,000	23.9
Signal Flashing	107	2.1	102	3.2	1	6.7	210	2.5
Other Controls	149	2.9	90	2.8			239	2.8
Stop Sign	1,094	21.0	1,439	45.5	4	26.7	2,537	30.3
Yield Sign	41	0.8	64	2.0			105	1.2
Other			5	0.2			5	0.1
Unknown	30	0.6	8	0.3			38	0.5
Total	**5,198**	**100.0**	**3,160**	**100.0**	**15**	**100.0**	**8,373**	**100.0**

Forty-five percent of the 418 fatal accidents at rail-highway grade crossings occurred where there were neither gates, signals, nor watchmen to alert motorists to oncoming trains (Figure V-7).

Fatal accidents occurred most often during normal weather regardless of lighting condition (Figure V-8). Indeed, normal weather is associated with 86.5 percent of all fatal accidents that occurred during daylight hours.

Water, snow, ice or slush on the roadway while it was still raining, snowing or sleeting was a factor in only about 13 percent of all fatal accidents.

The substantial fatality reductions that occurred during 1983 were almost entirely in periods of normal weather. Fatalities remained at previous levels or actually increased during periods of inclement weather.

FIGURE V-7
FATAL ACCIDENTS AT RAILROAD CROSSINGS BY TYPE OF CONTROL
(418)

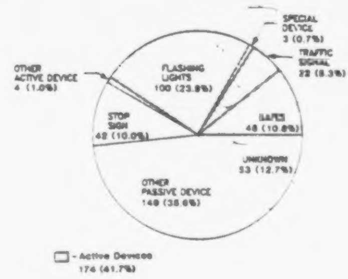
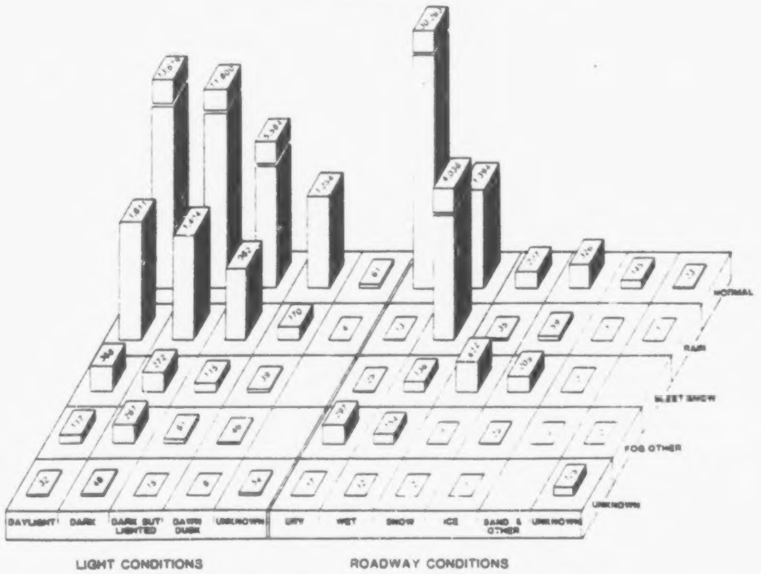


FIGURE V-8
ATMOSPHERIC CONDITIONS IN FATAL ACCIDENTS BY LIGHT AND SURFACE CONDITIONS
(37,971)



* "Other" atmospheric conditions include smog, smoke, and blowing sand or dust.
"Normal" atmospheric conditions denote no adverse conditions.
"Other" roadway surface conditions include dirt and oil.

VI. Vehicles

The 37,971 fatal accidents in 1983 involved 55,099 motor vehicles, 2.4 percent fewer than in 1982. Though significant, this decrease was not as sharp as the one that occurred from 1981 to 1982 when fatal accidents dropped by 11.1 percent. Figure VI-1 shows the number of vehicles per fatal accident.

Table VI-1 presents the distribution of vehicles, vehicle occupants, and associated occupant fatalities among vehicle types. Passenger cars were the most frequently involved and accounted for the largest proportion of occupant deaths. However, 3 percent fewer passenger cars were reported in fatal accidents in 1983 than in 1982, while the number of passenger car occupants killed dropped 1.5 percent. The next two most frequently involved vehicle types, associated with the next largest proportions of occupant fatalities, were light trucks and motorcycles.

Motorcyclists were 5,113 (5.6 percent) of the 90,663 occupants involved and 4,103 (11.8 percent) of the 34,840 occupants killed. Conversely, medium and heavy truck occupants together totaled 6.3 percent of all occupants, but only 2.8 percent of those killed. The number of heavy trucks involved in fatal accidents increased 5.6 percent from 1982. The smallest decreases of reported vehicle involvements in fatal accidents from 1982 to 1983 were among light and medium trucks (-2.7 percent and -1.5 percent respectively). Medium and heavy trucks occupant fatalities increased 7.8 percent and 2.2 percent respectively.

FIGURE VI-1
NUMBER OF VEHICLES PER FATAL ACCIDENT
(37,971)

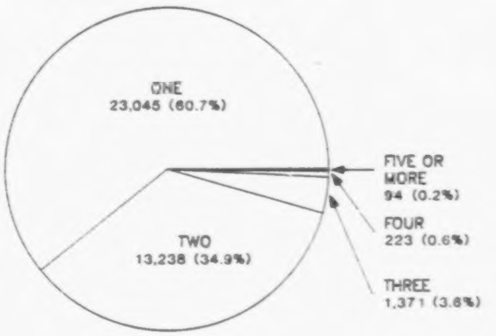


TABLE VI-1
INVOLVED VEHICLES, OCCUPANTS AND OCCUPANT FATALITIES BY BODY TYPE

	Vehicles		Occupants		Occupant Fatalities	
	Number	%	Number	%	Number	%
Passenger Cars	33,288	60.4	57,474	63.4	22,975	65.9
Convertible	285	0.5	468	0.5	222	0.6
2 Door Sedan, Hardtop, Coupe	18,342	33.3	31,139	34.3	12,955	37.2
3 Door/2 Door Hatchback	967	1.8	1,665	1.8	824	2.4
4 Door Sedan Hardtop	8,361	15.2	14,661	16.2	5,584	16.0
5 Door/4 Door Hatchback	203	0.4	364	0.4	188	0.5
Station Wagon	2,338	4.2	4,531	5.0	1,570	4.5
Hatchback Doors Unknown	71	0.1	128	0.1	64	0.2
Other Auto	3	0.0	6	0.0	3	0.0
Unknown Auto	2,474	4.5	4,112	4.5	1,407	4.0
Auto Based Pickup	240	0.4	394	0.4	157	0.5
Auto Based Short Panel	4	0.0	6	0.0	1	0.0
Motorcycles	4,141	7.5	5,113	5.6	4,103	11.8
Other Motorized Cycles	160	0.3	200	0.2	161	0.5
Moped	93	0.2	107	0.1	91	0.3
Other Motorcycle - Minibike	46	0.1	62	0.1	50	0.1
Unknown Motorcycle	21	0.0	31	0.0	20	0.1
Light Trucks	9,878	17.9	17,074	18.8	5,379	15.4
Van	1,451	2.6	2,973	3.3	646	1.9
Commercial Cutaway Van	69	0.1	85	0.1	20	0.1
Other Van	12	0.0	16	0.0	3	0.0
Unknown Van	80	0.1	154	0.2	28	0.1
Pickup	7,759	14.1	12,983	14.3	4,455	12.8
Pickup with Camper	69	0.1	139	0.2	41	0.1
Cab Chassis Based Light Truck	108	0.2	157	0.2	25	0.1
Panel Truck	9	0.0	12	0.0	3	0.0
Truck Based Station Wagon	148	0.3	299	0.3	85	0.2
Other Conventional Light Truck	8	0.0	13	0.0	2	0.0
Unknown Conventional Light Truck	107	0.2	161	0.2	55	0.2
Unknown Light Truck	50	0.1	82	0.1	16	0.0
Medium Trucks	664	1.2	868	1.0	166	0.5
Straight Truck 10,000 to 19,500 Lbs. GVWR	230	0.4	305	0.3	58	0.2
Straight Truck 19,500 to 26,000 Lbs. GVWR	120	0.2	151	0.2	25	0.1
Unknown Medium Truck	46	0.1	64	0.1	7	0.0
Straight Truck Unknown GVWR	268	0.5	348	0.4	76	0.2
Heavy Trucks	4,174	7.6	4,807	5.3	846	2.3
Straight Heavy Truck over 26,000 Lbs.	320	0.6	387	0.4	99	0.2
Truck Tractor	3,727	6.8	4,267	4.7	735	2.1
Unknown Heavy Truck	127	0.2	153	0.2	12	0.0
Buses	306	0.6	1,099	1.2	53	0.2
School Bus	99	0.2	337	0.4	17	0.0
Cross Country/ Intercity Bus	41	0.1	176	0.2	9	0.0
Transit Bus	105	0.2	211	0.2	4	0.0
Other Bus	40	0.1	309	0.3	21	0.1
Unknown Bus	21	0.0	66	0.1	2	0.0
Special Vehicles	1,523	2.8	2,906	3.2	1,060	3.0
Auto Based Short Panel	5	0.0	15	0.0	1	0.0
Auto Based Short Utility	465	0.8	900	1.0	413	1.2
Van	13	0.0	30	0.0	7	0.0
Commercial Cutaway Van	2	0.0	3	0.0	1	0.0
Van Based Motorhome	29	0.1	75	0.1	17	0.0
Other Van	9	0.0	16	0.0	6	0.0
Unknown Van	1	0.0	4	0.0	1	0.0
Pickup Based Motorhome	15	0.0	31	0.0	6	0.0
Cab Chassis Based Light Truck	2	0.0	6	0.0	0	0.0
Utility Truck	567	1.0	1,122	1.2	352	1.0
Utility, Based Body Unknown	10	0.0	27	0.0	4	0.0
Medium or Heavy Truck Based Motorhome	15	0.0	43	0.0	6	0.0
Unknown Truck Camper/Motorhome	59	0.1	155	0.2	19	0.1
Unknown Truck	53	0.1	78	0.1	45	0.1
Snowmobile	27	0.0	41	0.0	25	0.1
Farm Equipment except Trucks	146	0.3	190	0.2	92	0.3
All Terrain Vehicles	45	0.1	64	0.1	42	0.1
Construct. Equip. except Trucks	40	0.1	40	0.0	16	0.0
Other	24	0.1	56	0.1	7	0.0
Unknown	973	1.8	1,122	1.2	137	0.4
Unknown Truck	194	0.4	244	0.3	40	0.1
Unknown Other Vehicles	14	0.0	21	0.0	4	0.0
Unknown Body Type	765	1.4	857	0.9	93	0.3
Total	55,099	100.0	90,663	100.0	34,840	100.0

Table VI-2 distributes involved vehicles by most harmful event. Collisions with parked motor vehicles, animals, and trains are included in the "other objects not fixed" category. "Collision with motor vehicle in transport" accounted for 51.7 percent of the most harmful events in fatal accidents. Collisions with roadside objects (i.e., trees, dividers, culverts or ditches, curbs or walls, embankments, fences, light supports, guard rails, sign posts, utility poles, impact attenuators, and bridges or overpasses) were cited as the most harmful event for 14 percent of the vehicles.

The distributions of most harmful events recorded for the 17,295 occupant deaths that resulted from single-vehicle accidents and the 17,545 occupant deaths from multi-vehicle accidents are shown in Table VI-3 and Table VI-4.

TABLE VI-2
VEHICLES INVOLVED IN FATAL ACCIDENTS BY MOST HARMFUL EVENT

Most Harmful Event	Vehicles	
	Number	%
Noncollision	8,025	14.6
Collision with		
Nonoccupant	7,439	13.5
Tree or Shrubbery	2,774	5.0
Utility Pole or Sign	1,757	3.2
Guard Rail	532	1.0
Other Fixed Object	2,680	4.9
Other Object not Fixed	1,111	2.0
Motor Vehicle in Transport	28,471	51.7
Unknown	2,310	4.2
Total	**55,099**	**100.0**

TABLE VI-3
MOST HARMFUL EVENT IN SINGLE VEHICLE OCCUPANT FATALITIES BY LAND USE AND ROADWAY FUNCTION CLASS

Most Harmful Event	Interstate Freeway	Other Freeway & Expressway	Other Principal Arterial	Minor Arterial	Collector	Local	Unknown	Total
Urban	**761**	**516**	**1,252**	**1,218**	**652**	**1,472**	**12**	**5,883**
Noncollision Overturn	159	77	124	116	52	164	3	695
Noncollision Other	16	16	41	44	25	131	2	275
Nonoccupant		1	3	3	2	4		13
Tree or Shrubbery	27	52	132	184	153	293	2	843
Utility Pole or Sign	77	83	376	319	135	232	1	1,223
Guard Rail	216	98	58	44	30	44		490
Other Object not Fixed	74	23	79	106	59	163		504
Other Fixed Object	192	166	439	402	195	439	4	1,837
Unknown					1	2		3
Rural	**1,043**		**1,560**	**1,842**	**4,273**	**2,629**	**41**	**11,388**
Noncollision Overturn	400		456	450	1,021	635	7	2,969
Noncollision Other	20		31	37	132	140	3	363
Nonoccupant	1		4	1		1		7
Tree or Shrubbery	46		204	339	824	554	9	1,976
Utility Pole or Sign	54		156	196	461	209	3	1,079
Guard Rail	189		145	118	178	45		675
Other Object not Fixed	105		59	74	178	250	6	672
Other Fixed Object	228		504	625	1,478	791	12	3,638
Unknown			1	2	1	4	1	9
Unknown Land Use	**2**						**22**	**24**
Total	**1,806**	**516**	**2,812**	**3,060**	**4,925**	**4,101**	**75**	**17,295**

TABLE VI-4
MOST HARMFUL EVENT IN MULTI-VEHICLE OCCUPANT FATALITIES BY LAND USE AND ROADWAY FUNCTION CLASS

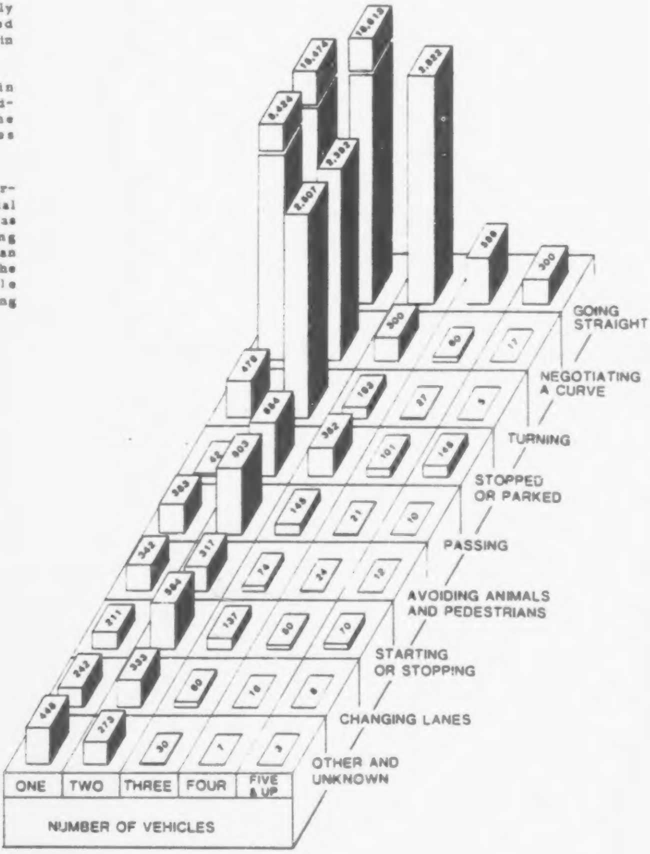
Most Harmful Event	Interstate	Other Freeway & Expressway	Other Principal Arterial	Minor Arterial	Collector	Local	Unknown	Total
Urban	709	666	2,541	1,658	587	941	10	7,112
Noncollision Overturn	14	7	17	11	6	7		62
Noncollision Other	6	5	4	4		5		24
Nonoccupant	1		1			2		4
Tree or Shrubbery	1	1	2		1	2		7
Utility Pole or Sign	1	3	10	7	1	2		24
Guard Rail	27	11	8	3	3	2		54
Other Object not Fixed	9	6	5	4	4	10		38
Other Fixed Object	16	34	48	10	1	6		115
Rear End	283	162	294	161	36	63	1	1,000
Head On	165	167	725	515	209	252	2	2,035
Rear to Rear	1	1	1	1		1		5
Angle	107	243	1,337	875	297	557	7	3,423
Side-Swipe	77	26	88	66	27	31		315
Collision, Type Unknown	1		1		2	1		5
Unknown				1				1
Rural	832		3,101	2,519	3,042	874	28	10,396
Noncollision Overturn	7		23	22	22	9		83
Noncollision Other	6		11	3	4	2		26
Nonoccupant			1					1
Tree or Shrubbery			2		5	1		8
Utility Pole or Sign	1		4	4	8			17
Guard Rail	12		23	18	9			62
Other Object not Fixed	13		12	13	10	2		50
Other Fixed Object	13		25	19	16	6		79
Rear End	344		315	193	189	62	1	1,104
Head On	262		1,553	1,332	1,458	418	23	5,046
Rear to Rear			2	3	1	1	1	8
Angle	124		990	842	1,219	345	3	3,523
Side-Swipe	49		137	68	100	24		378
Collision, Type Unknown	1		3	2	1	4		11
Unknown Land Use	1		5				31	37
Total	1,542	666	5,647	4,177	3,629	1,815	69	17,545

Signs, poles and other fixed objects were struck most frequently in single-vehicle accidents in urban areas. Trees and other fixed objects were the most frequently struck in rural areas. Rollovers caused a frequency of fatalities second only to collision with "other fixed objects" as the most harmful event in fatal rural accidents.

Multi-vehicle fatalities in rural areas most often involved head-on crashes. In urban areas the greatest number of fatalities occurred in angle crashes.

The greatest number (68.6 percent) of vehicles involved in fatal single and multi-vehicle crashes was reported to have been "going straight" (Figure VI-2). More than two-thirds (70.3 percent) of all the vehicles in fatal two-vehicle collisions were reportedly "going straight" prior to the crash.

FIGURE VI-2
VEHICLE MANEUVER IN FATAL ACCIDENTS
(55,099)



Of the 120 fatal accidents of vehicles carrying hazardous cargo (Figure VI-3), most were tractor-trailers (66.7 percent) or other heavy and medium trucks (23.3 percent).

It is possible for people to be killed in accidents even though the vehicle in which they were riding sustained only moderate, minor or even no damage. Figure VI-4 shows that moderate to no damage was done to 3,518 vehicles (6.4 percent of the 55,099 total involved vehicles), in which occupants were killed.

FIGURE VI-3
HAZARDOUS CARGO CARRYING VEHICLES INVOLVED IN FATAL ACCIDENTS
(120)

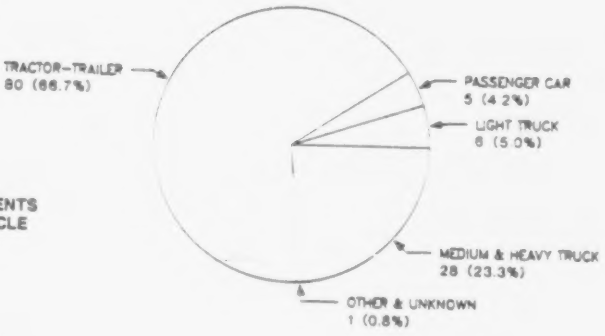
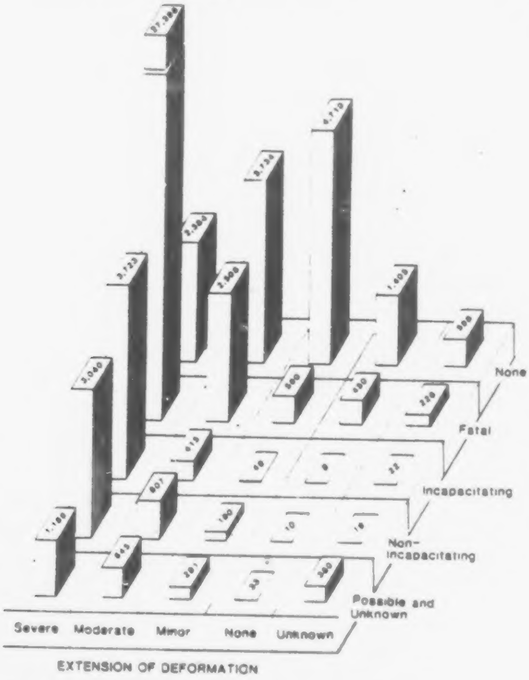


FIGURE VI-4
VEHICLE DAMAGE IN FATAL ACCIDENTS BY MOST SEVERE INJURY IN VEHICLE
(55,099)



NOTE: There were 317 vehicles which had no associated person records.
In some states the terms Disabling, Functional, and Other are used in place of Severe, Moderate, and Minor, respectively.

The ratio of the number of occupants killed in accidents to the number of occupants involved in fatal accidents varies widely from one vehicle type to another (Table VI-5). Several factors contribute to this, including the amount of protection that the vehicle structure provides and the number of people who customarily ride in the vehicle. For example, only 4.8 percent of all school bus occupants involved in fatal accidents were killed, while 80.2 percent of all motorcycle riders who were involved in fatal accidents were killed. These ratios obviously reflect the fact that school buses generally transport more people and provide more protection than motorcycles.

The remainder of this chapter examines various aspects of fatal accidents by generic vehicle type.

PASSENGER CARS

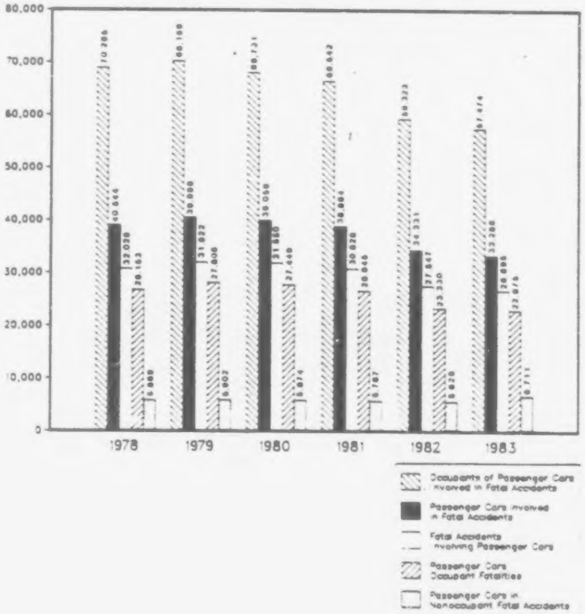
Almost two-thirds (60.4 percent) of all vehicles involved in fatal accidents were passenger cars. Table VI-1 shows the distribution of vehicle involvements and occupant deaths by type of passenger car. Two- and four-door sedans, were the most frequently involved passenger car types (48.5 percent) and accounted for most car occupant deaths (53.2 percent).

Figure VI-5 shows the six-year history of fatal accidents and fatalities involving passenger cars; 33,288 passenger cars were involved in 26,695 fatal accidents in 1983, resulting in 22,975 passenger car occupants killed, a decrease of 1.5 percent from 1982.

TABLE VI-5
OCCUPANTS AND OCCUPANT FATALITIES BY BODY TYPE

Body Type	Occupants	Fatalities	Percent of Occupants Fatally Injured
Passenger Cars	57,474	22,975	40.0
Motorcycles	5,113	4,103	80.2
Other Motorized Cycles	200	161	80.5
Light Trucks	17,074	5,379	31.5
Medium Trucks	868	166	19.1
Heavy Trucks	4,807	806	16.8
Buses	1,099	53	4.8
Special Vehicles	2,906	1,060	36.5
Unknown	1,122	137	12.2
Total	90,663	34,840	38.4

FIGURE VI-5
PASSENGER CAR INVOLVED FATAL ACCIDENTS AND RELATED FATALITIES FOR 1978-1983



The distribution of involved passenger cars by most harmful event is displayed in Figure VI-6. Collision with a motor vehicle in transport was the most harmful event for slightly less than half (49.6 percent) of the passenger cars involved in fatal accidents. Vehicles involved in collisions with other motor vehicles are further subdivided by the "manner of collision," an accident-related variable associated with the first harmful event in the accident. This classification may not be accurate for collisions of three or more vehicles. Collisions with nonoccupants and noncollisions together accounted for another 26.6 percent. However, the total number of fixed object collisions is greater than either "collision with nonoccupant" or "noncollision."

The first harmful event in more than half of all passenger car occupant fatalities was a collision with another motor vehicle. In more than one-third, it was a collision with a fixed object (Table VI-6).

FIGURE VI-6
DISTRIBUTION OF PASSENGER CARS INVOLVED IN FATAL ACCIDENTS BY MOST HARMFUL EVENT
(33,288)

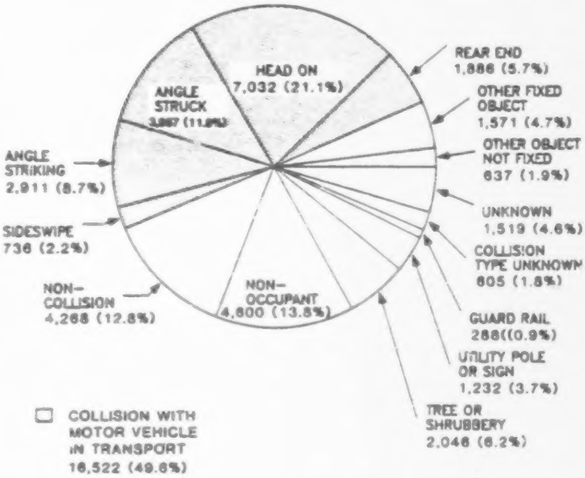


TABLE VI-6
PASSENGER CAR OCCUPANT FATALITIES BY FIRST HARMFUL EVENT
1983
(22,975)

	Number	Percent
Collision with Motor Vehicle in Transport*	11,994	52.2
Rear End	1,219	5.3
Head On	5,472	23.8
Rear to Rear	10	0.0
Angle	4,839	21.1
Side-Swipe	446	1.9
Collision, Type Unknown	8	0.0
Tree or Shrubbery	2,135	9.3
Utility Pole or Sign	1,652	7.2
Guard Rail	769	3.3
Other Object not Fixed	749	3.3
Other Fixed Object	3,575	15.6
Noncollision Overturn	1,842	8.0
Noncollision Other	247	1.1
Nonoccupant	11	0.0
Unknown	1	0.0
Total	22,975	100.0

*Based on "Manner of Collision". Possibly inaccurate where three or more vehicles are involved.

Each of the 22,975 passenger car occupant deaths in 1983 can also be classified by the point on the vehicle at which the principal impact occurred. When the terms "Front," "Rear," "Left Side," and "Right Side" are used in this report, they refer to groupings as follows:

Front:
    clock points 11, 12, and 1
Rear:
    clock points 5, 6 and 7
Left side:
    clock points 8, 9, and 10
Right side:
    clock points 2, 3 and 4

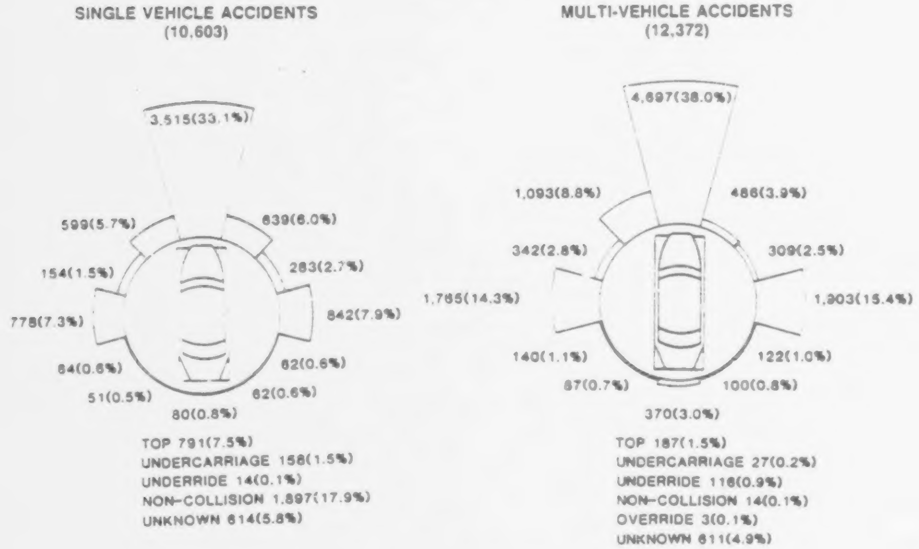
The impact points "top," "undercarriage" and "underride" are also included in Figure VI-7. "Top" was recorded when the vehicle incurred damage from hitting its top against an object during an accident, an example being a truck hitting a bridge overpass. "Undercarriage" refers to the underside of the vehicle. "Underride" refers to accidents in which a vehicle slides under another vehicle. The most common example is that of an automobile striking the rear or side of a tractor-trailer and continuing wholly or partly under the truck. The principal point of impact recorded for such an accident would be "underride" for the striking automobile and "undercarriage" for the struck truck.

Noncollision data are also included. When the only event in an accident is an overturn, for example, the accident is not considered a collision and impact points are not coded.

Frontal collisions were associated with almost half of all passenger car occupant deaths. Occupant deaths were about equal for left and right side collisions and, taken together, accounted for the second largest proportion of passenger car occupant deaths.

More than one in six (17.9 percent) passenger car occupant deaths in single vehicle accidents resulted from noncollision events (e.g., overturn, gas inhalation, vehicle fire, immersion).

FIGURE VI-7
DISTRIBUTION OF PASSENGER CAR OCCUPANT FATALITIES
BY POINT OF PRINCIPAL IMPACT
(22,975)



Significantly, although more than half (51.8 percent) of all passenger cars in fatal accidents were subcompact and compact cars, those cars accounted for almost 60 percent of all passenger car occupant deaths (Table VI-7). Small subcompact cars had 21.4 percent of the fatalities and only 17.6 percent of the involved passenger cars, while full size cars had 9.1 percent of the fatalities and 11.7 percent of the involved passenger cars.

While the number of passenger car fatalities and vehicles in fatal accidents dropped about 2.5 percent and 1.5 percent, respectively from 1982, the decline was not consistent among automobiles of all sizes. Fatalities in smaller cars increased while fatalities in intermediate and full size cars continued to drop.

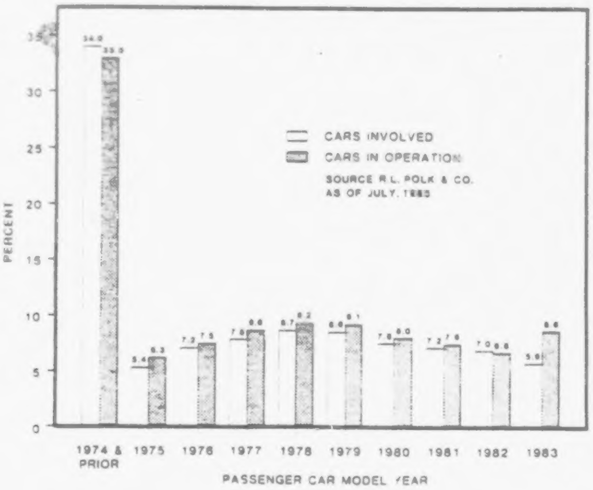
The model-year distribution of passenger cars involved in fatal accidents is compared to the model year distribution of passenger cars estimated by R.L. Polk and Company to be in operation as of 1983 (Figure VI-8). The newest model cars appear to be under-represented. Passenger cars 9 years old or older were involved in fatal accidents slightly more often than their representation in the total population would indicate.

TABLE VI-7
INVOLVED VEHICLES AND OCCUPANT FATALITIES BY VEHICLE SIZE
(Passenger Cars Only)

	Vehicles		Occupants		Occupant Fatalities	
Wheel Base	Number	%	Number	%	Number	%
Small Subcompact (Under 96 inches)	5,826	17.6	9,860	17.2	4,912	21.4
Subcompact (96 to 101 inches)	3,430	10.4	5,864	10.2	2,705	11.8
Compact (102 to 111 inches)	7,895	23.8	13,809	24.0	5,614	24.5
Intermediate (112 to 120 inches)	7,580	22.9	13,429	23.4	4,548	19.8
Full Size (Over 120 inches)	3,883	11.7	6,793	11.8	2,083	9.1
Unknown	4,507	13.6	7,668	13.4	3,097	13.5
Total	**33,121**	**100.0**	**57,423**	**100.0**	**22,959**	**100.0**

Note: There are 167 Passenger Cars which have no associated person records.

FIGURE VI-8
PASSENGER CAR INVOLVEMENT BY MODEL YEAR
(33,288)



SOURCE R.L. POLK & CO.
AS OF JULY, 1983

NOTE: 224 CARS WITH UNKNOWN MODEL YEAR INVOLVED.

MOTORCYCLES

In 1983, motorcycle rider fatalities declined about 4 percent from 1982.* 4,103 motorcycle riders were killed in 4,043 accidents that involved 4,141 motorcycles. The six-year history in Figure VI-9 illustrates that while fatal motorcycle accidents increased from 1978 to 1980, the number of accidents, motorcycles involved, and riders killed all began to decline in 1981, a trend that continued through 1983. However, the number of rider fatalities continued to exceed the number of fatal motorcycle accidents. This is the only vehicle type for which this is true. When a motorcycle was involved in a fatal accident, at least one fatality was almost always a motorcycle rider: 0.99 motorcyclist died for every motorcycle involved in a fatal accident.

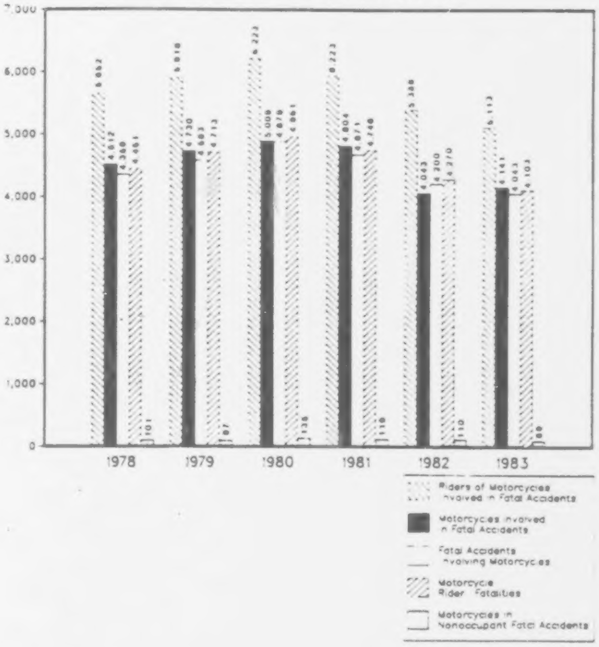


FIGURE VI-9
MOTORCYCLE INVOLVED FATAL ACCIDENTS AND RELATED FATALITIES FOR 1978-1983

TABLE VI-8
INVOLVED VEHICLES, OCCUPANTS AND FATALITIES BY BODY TYPE FOR MOTORCYCLES

	Vehicles		Occupants		Occupant Fatalities	
	Number	%	Number	%	Number	%
Motorcycles	4,141	96.3	5,113	96.2	4,103	96.2
Other Motorized Cycles						
Moped	93	2.2	107	2.0	91	2.1
Other & Unknown Motorcycle	67	1.5	93	1.8	70	1.7
Total	4,301	100.0	5,313	100.0	4,264	100.0

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*The term "motorcycles," as used in this section, does not include mopeds, motorscooters, minibikes, and motorcycle types not specifically named in the FARS file. The total number of riders, rider fatalities, fatal accidents, and motorcycle involvements associated with mopeds, motorscooters, minibikes and unknown type motorcycles, in addition to motorcycles, are shown in Table VI-8.

As was the case with passenger cars, most motorcycles, (47.6 percent) involved in fatal accidents collided with other motor vehicles in transport (Figure VI-10). Motorcyclists were seldom in fatal accidents with pedestrians or bicyclists. However, motorcycles collided with "other fixed objects" 12.1 percent of the time, almost triple the rate of passenger car collisions in this category and more frequently than such collisions experienced by any other vehicle type considered in this chapter. As in fatal accidents involving passenger cars, collision with all types of "fixed objects" was cited more often for motorcycles than was "noncollision."

Of the 4,103 motorcycle riders killed in 1983, frontal impacts were associated even more often than was the case for passenger cars: 69.1 percent of motorcycle-rider deaths (Figure VI-11). Only 8.5 percent of the rider fatalities resulted from noncollision events, including overturns and falls from vehicles. As with passenger cars, little difference was found between fatality rates resulting from principal impacts to the left and right sides.

FIGURE VI-10
DISTRIBUTION OF MOTORCYCLES INVOLVED IN FATAL ACCIDENTS BY MOST HARMFUL EVENT
(4,141)

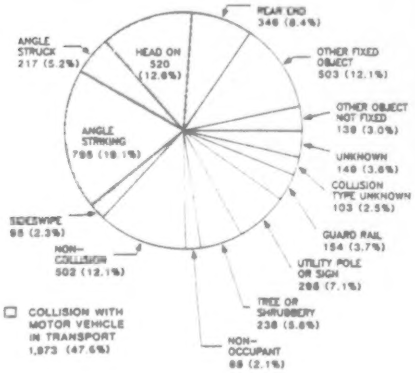
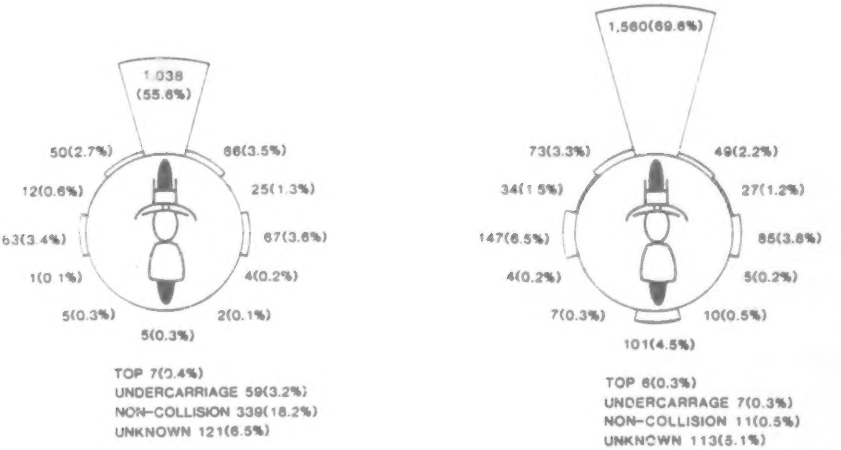


FIGURE VI-11
DISTRIBUTION OF MOTORCYCLE RIDER FATALITIES
BY POINT OF PRINCIPAL IMPACT
(4,103)



LIGHT TRUCKS

Fatal accidents and occupant deaths associated with light trucks* continued to decline in 1983, a trend that began in 1981 (Figure VI-12). The 5,379 light truck occupant deaths in 1983 represent a decrease from 1982 of 3.6 percent, a departure from the 10.5 percent average annual rate of increase that persisted from 1975 to 1979.

While pickup trucks were involved in fatal accidents almost five times as often as were vans and were carrying four times as many occupants, they had more than six times the number of the occupant deaths (Table VI-9).

FIGURE VI-12
LIGHT TRUCK INVOLVED FATAL ACCIDENTS AND RELATED FATALITIES FOR 1978 TO 1983

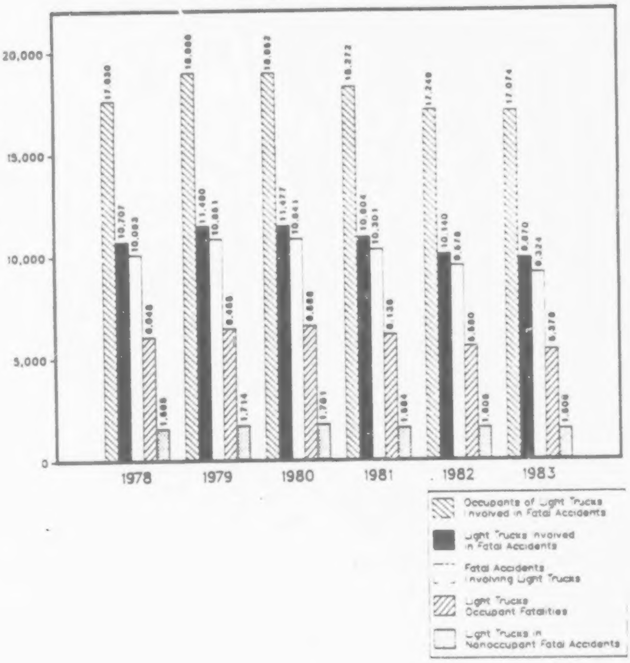


TABLE VI-9
INVOLVED VEHICLES, OCCUPANTS AND FATALITIES BY BODY TYPE FOR LIGHT TRUCKS

	Vehicles		Occupants		Occupant Fatalities	
	Number	%	Number	%	Number	%
Light Trucks						
Van	1,612	16.3	3,228	18.9	697	13.0
Pickup	7,828	79.3	13,122	76.9	4,496	83.6
Other Light Truck	273	2.8	481	2.8	115	2.1
Unknown Light Truck	157	1.6	243	1.4	71	1.3
Total	**9,870**	**100.0**	**17,074**	**100.0**	**5,379**	**100.0**

---

*Among light trucks were included pickups, vans, and truck-based station wagons.

The most harmful event reported for almost half (47.8 percent) of the 9,870 light trucks involved in 1983 fatal accidents (Figure VI-13) was collision with a motor vehicle in transport. Noncollision events were cited for another 20.3 percent, including falls from the vehicle, overturns, fires, explosions, gas inhalations, injury in the vehicle, immersions, and other noncollisions. This is substantially greater than noncollision events reported for passenger cars (12.8 percent).

Light trucks collided with non-occupants in 14.2 percent of the fatal accidents involving light trucks. This was almost the same as that reported for passenger cars (Figure VI-13 and Figure VI-6). Again, as with cars and motorcycles, frontal impacts accounted for the single largest share of occupant fatalities. In trucks of all sizes, the proportion of frontal occupant fatalities in multi-vehicle accidents is much greater than in single vehicle accidents. In this respect, trucks differ from automobiles and motorcycles where the proportion of frontal fatalities is roughly the same for single and multi-vehicle accidents.

FIGURE VI-13
DISTRIBUTION OF LIGHT TRUCKS INVOLVED IN FATAL ACCIDENTS BY MOST HARMFUL EVENT
(9,870)

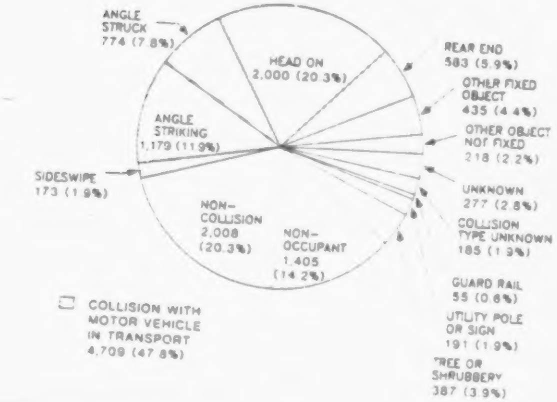
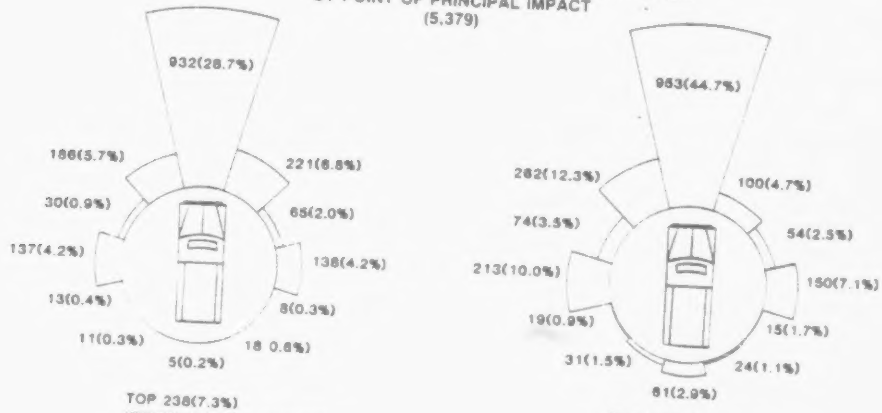


FIGURE VI-14
DISTRIBUTION OF LIGHT TRUCK OCCUPANT FATALITIES BY POINT OF PRINCIPAL IMPACT
(5,379)



TOP 238(7.3%)
UNDERCARRIAGE 5^(1.7%)
UNDERRIDE 4(0.1%)
NON-COLLISION 1,093(33.6%)
UNKNOWN 98(3.0%)

TOP 71(3.3%)
UNDERCARRIAGE 10(0.5%)
UNDERRIDE 17(0.8%)
OVERIDE 1(0.1%)
NON-COLLISION 4(0.2)
UNKNOWN 69(3.2%)

MEDIUM TRUCKS

In 1983, 166 out of 868 occupants of medium* trucks were killed in a total of 657 fatal accidents. This is a slight increase (7.8 percent) from 154 in 1982. As might be expected, proportionately fewer occupants of these vehicles (1 of 5) were killed in fatal accidents than in automobiles (2 of 5) or light trucks (1 of 3).

The history of medium truck accidents and occupant deaths since 1978 is shown in Figure VI-15.

To an even greater degree than for other vehicle types, the most harmful event cited for most medium truck involvements in 1983 fatal accidents was one of the following (Figure VI-16):

- o Collision with Motor Vehicle in Transport (59.1 percent)
- o Noncollision (14.3 percent)
- o Collision with Nonoccupant (12.4 percent)

FIGURE VI-15
MEDIUM TRUCK INVOLVED FATAL ACCIDENTS AND RELATED FATALITIES FOR 1978 TO 1983

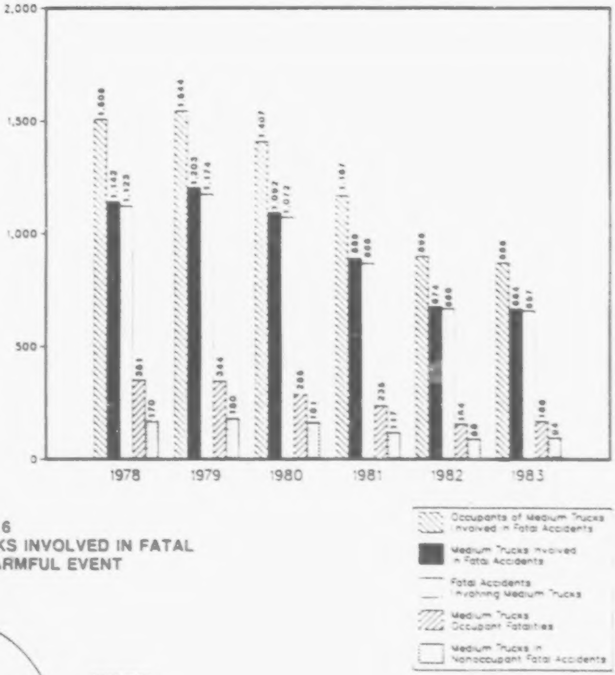
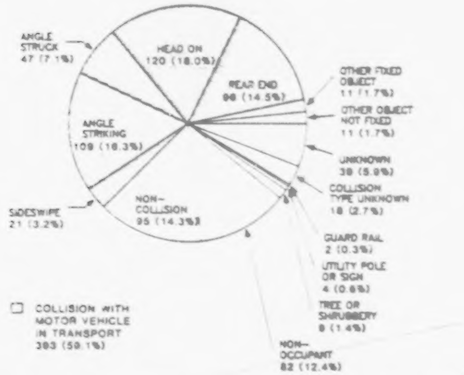


FIGURE VI-16
DISTRIBUTION OF MEDIUM TRUCKS INVOLVED IN FATAL ACCIDENTS BY MOST HARMFUL EVENT
(664)



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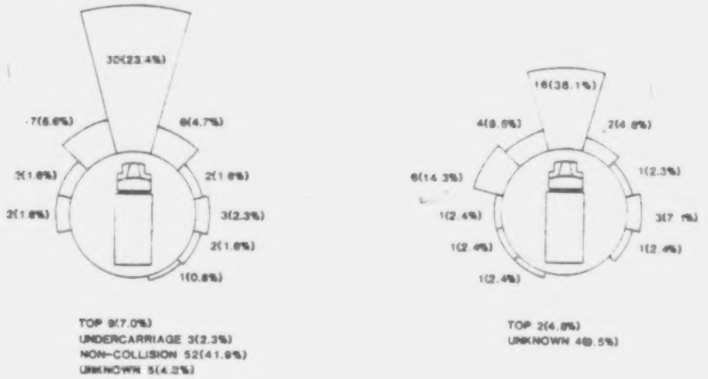
*"Medium trucks" are defined as single-unit trucks with gross vehicle weights (GVW) between 10,000 and 26,000 pounds. Single-unit trucks of unknown GVW are also included in this group.

As with other vehicle types, frontal impacts caused a large share (27.7 percent) of occupant deaths (Figure VI-17). However, for this type of vehicle, noncollision accidents were the largest source of fatalities. In fact, medium trucks had the highest incidence of non-collision fatalities of all vehicles considered in this report.

In these vehicles, the proportion of frontal fatalities in multi-vehicle accidents was about 1.5 times their proportion in single vehicle accidents. In FARS, underride is not applicable for this type vehicle.

FIGURE VI-17
DISTRIBUTION OF MEDIUM TRUCK OCCUPANT FATALITIES
BY POINT OF PRINCIPAL IMPACT
(166)



SINGLE VEHICLE ACCIDENTS
(124)

MULTI-VEHICLE ACCIDENTS
(42)

TABLE VI-10
INVOLVED VEHICLES, OCCUPANTS AND FATALITIES BY GROSS WEIGHT FOR MEDIUM TRUCKS

	Vehicles		Occupants		Occupant Fatalities	
	Number	%	Number	%	Number	%
Medium Trucks						
10,000 to 19,500 Lbs.	230	34.6	305	35.1	58	34.9
19,500 to 26,000 Lbs.	120	18.1	151	17.4	25	15.1
Unknown Gross Vehicle Weight	314	47.3	412	47.5	83	50.0
Total	**664**	**100.0**	**868**	**100.0**	**166**	**100.0**

HEAVY TRUCKS

The number of heavy trucks* involved in fatal accidents increased from 1980 to 1981, declined in 1982 and rose again in 1983. The number of occupants who were killed in these trucks decreased continuously (Figure VI-18).

Two-thirds (66.2 percent) of the 4,174 heavy trucks involved in fatal accidents had a "collision with a motor vehicle in transport" as the most harmful event. This is a larger proportion than for any other vehicle type considered thus far (Figure VI-19). Conversely, the proportion of heavy trucks for which noncollisions were the most harmful event (11.6 percent) and the proportion for which collisions with nonoccupants (9.9 percent) were the most harmful event were both smaller than those of any of the other vehicle type except motorcycles.

FIGURE VI-18
HEAVY TRUCK INVOLVED FATAL ACCIDENTS AND RELATED FATALITIES FOR 1978-1983

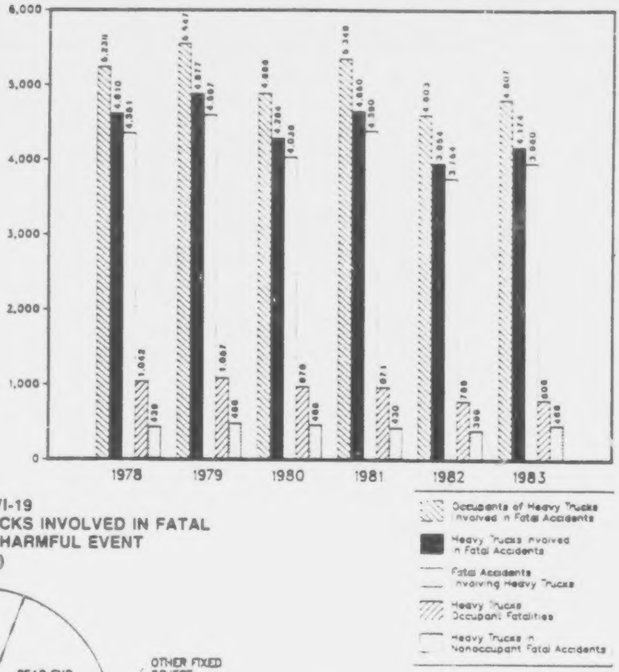
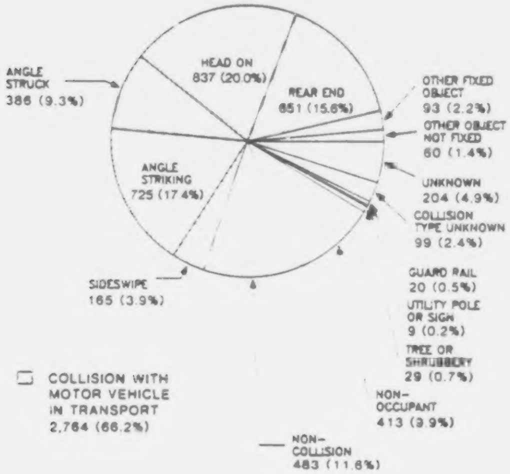


FIGURE VI-19
DISTRIBUTION OF HEAVY TRUCKS INVOLVED IN FATAL ACCIDENTS BY MOST HARMFUL EVENT
(4,174)



Vehicle size appears to correlate well with the likelihood of occupant fatality resulting from top impacts (Figure VI-20). As the size of the vehicle increases from motorcycle to heavy truck, the proportion of occupant deaths associated with top impacts also increases. Top impact was involved in 8.7 percent of 806 heavy truck occupant deaths.

As with other vehicle types, frontal impacts were associated with the largest proportion of occupant fatalities. However, the proportion of frontal fatalities in multi-vehicle heavy truck accidents is almost double that in single vehicle heavy truck accidents. Underride is not applicable to this vehicle type.

FIGURE VI-20
DISTRIBUTION OF HEAVY TRUCK OCCUPANT FATALITIES
BY POINT OF PRINCIPAL IMPACT
(806)

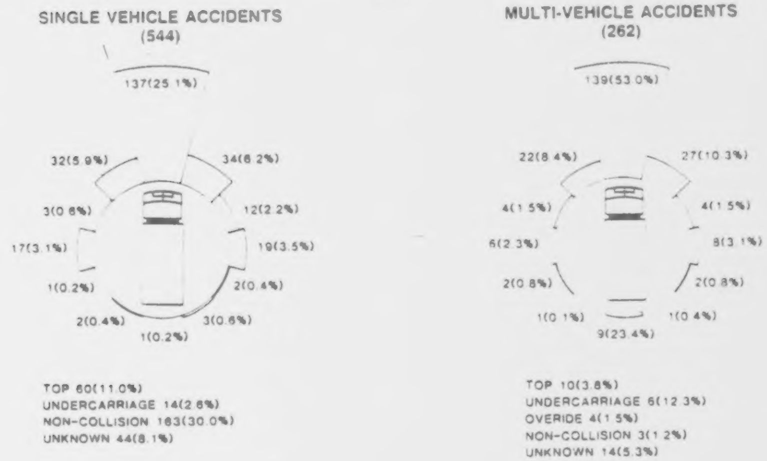


TABLE VI-11
INVOLVED VEHICLES, OCCUPANTS AND FATALITIES BY TRAILING UNIT FOR HEAVY TRUCKS

	Vehicles		Occupants		Occupant Fatalities	
	Number	%	Number	%	Number	%
Heavy Trucks (Weight>26,000 lbs.)						
Single Unit	320	7.7	387	8.0	59	7.3
Truck Tractor	3,727	89.3	4,267	88.8	735	91.2
Unknown Heavy Truck	127	3.0	153	3.2	12	1.5
Total	**4,174**	**100.0**	**4,807**	**100.0**	**806**	**100.0**

*"Heavy trucks" include (1) single unit trucks with GVW greater than 26,000 pounds, (2) tractor-trailer combinations, (3) trucks with cargo trailer(s), and (4) truck-tractors pulling no trailer.

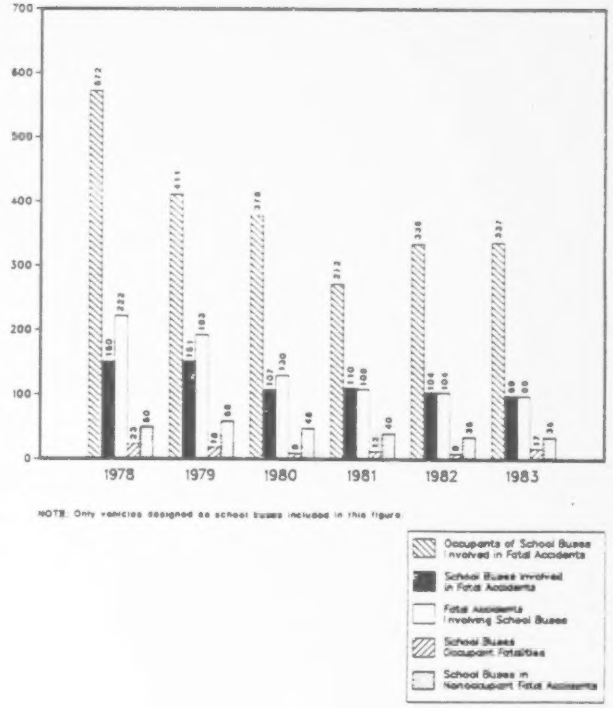
SCHOOL BUSES

This category includes both vehicles designed as buses and used in school transportation as well as vehicles of any body type functioning as school buses. (Figure VI-21 includes accidents, involvements and occupant fatalities for only those school buses designed as buses).

In FARS, a "school bus-related accident" is any fatal accident in which a vehicle functioning as a school bus is either directly or indirectly involved. Thus the category includes, for example, any accident in which a child disembarking from a school bus is struck by another vehicle. The fact that the child was struck after exiting the bus classes the accident as school bus-related even though the bus was neither a struck nor striking vehicle. Occupants of those vehicles which did not have the typical school bus body type but which were functioning as school buses were included with school bus occupants.

School bus-related accidents have steadily decreased since 1978 (Figure VI-21). Each year since 1978, between 9 and 23 occupants died in school bus accidents. Since 1980, fatal accidents involving school buses dropped 23.8 percent. The number of school buses involved in nonoccupant fatal accidents was at its lowest point since 1978. A smaller proportion (5 percent) of the occupants of school buses that were involved in fatal accidents in 1983 were themselves killed in those accidents than was the case for accident-involved occupants of any of the other vehicle types considered in this chapter. Table VI-12 displays data for school-type buses, whether or not they were used as school buses.

FIGURE VI-21
SCHOOL BUS RELATED FATAL ACCIDENTS
AND RELATED FATALITIES FOR 1978 TO 1983



NOTE: Only vehicles designed as school buses included in this figure.

TABLE VI-12
INVOLVED VEHICLES, OCCUPANTS AND FATALITIES BY BUS TYPE

	Vehicles		Occupants		Occupant Fatalities	
	Number	%	Number	%	Number	%
Buses						
School Bus	99	32.4	337	30.7	17	32.1
Cross Country/Intercity Bus	41	13.4	176	16.0	9	17.0
Transit Bus	105	34.3	211	19.2	4	7.5
Other & Unknown Bus	61	19.9	375	34.1	23	43.4
Total	306	100.0	1,099	100.0	53	100.0

The 99 school bus accidents in 1983 resulted in 139 deaths. 50 people who were killed were non-occupants and 89 were vehicle occupants, but only 13 of these were school bus occupants. In Figure VI-22, which presents a further distribution of these fatalities, "other driver" and "other passenger" were occupants of involved vehicles that were neither school buses nor vehicles being used as school buses.

The age distribution of the 44 pedestrians killed in the school bus accidents is depicted in Figure VI-23. Children under nine accounted for almost two-thirds of the pedestrian fatalities.

FIGURE VI-22
DISTRIBUTION OF FATALITIES IN FATAL ACCIDENTS INVOLVING SCHOOL BUSES
(139)

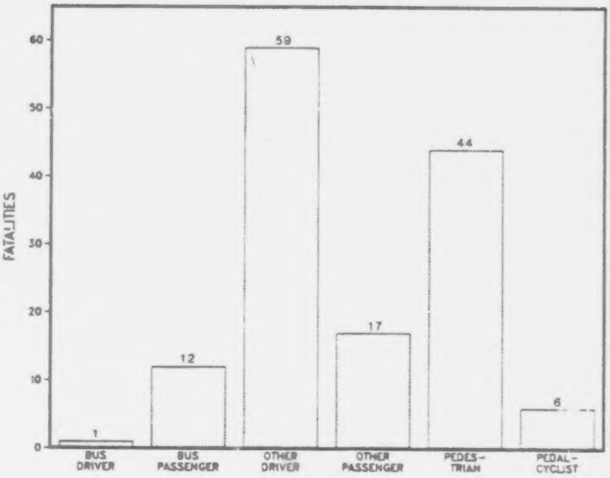
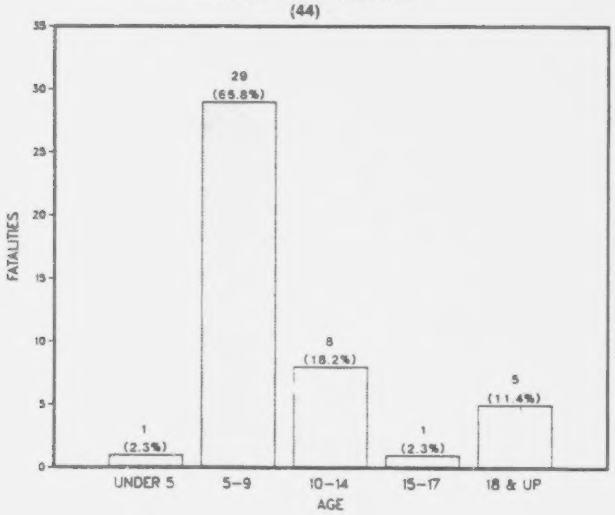


FIGURE VI-23
PEDESTRIAN FATALITIES IN FATAL SCHOOL BUS ACCIDENTS
(44)



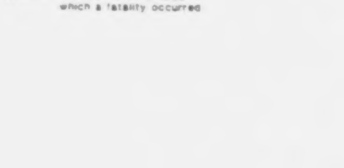
VII. Occupants

Four of every five people (81.8 percent) killed in traffic accidents in 1983 were occupants of a vehicle. Two-thirds (69.3) of these were drivers.

Of the total 34,840 occupants killed, 22,975 (66 percent) were occupants of passenger cars (Figure VII-1). Two-thirds of these (66.1 percent) were seated in what is customarily the driver's position, at the front left. Almost half (45.9 percent) of the 33,064 people in the left front seats of passenger cars involved in fatal accidents were killed.

In vehicles other than passenger cars, more occupants of the front left seat, were killed than were occupants of other seating positions (Figure VII-2). Of the 21,595 occupants of the driver's position in these involved vehicles, 41.5 percent were killed.

FIGURE VII-1
PASSENGER CAR OCCUPANT
AND FATALITY SEATING POSITIONS


Other and
Unknown
Seating
Position
605
15,186
2,520
33,064
1,857
20,081
351
681
1,704
2,419
1,276
1,677
480
1,810
1,249
748
3,131
2,279
4,917
12,826
9,037

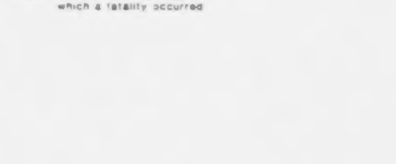
TOTAL

22,975 - Fatalities

57,474 - Occupants

37,488 - Occupants of vehicles in which a fatality occurred

FIGURE VII-2
NON-PASSENGER CAR OCCUPANT
AND FATALITY SEATING POSITIONS


Other and
Unknown
Seating
Position
531
8,963
1,270
21,600
10,979
45
395
307
1,862
193
612
3,191
2,305
51
1,288
332
4,687
206
2,684

TOTAL

11,865 - Fatalities

33,189 - Occupants

18,345 - Occupants of vehicles in which a fatality occurred

Drivers involved in fatal accidents in 1983 are classified according to age group and types of vehicle driven (Table VII-1). Other motorized cycles (mopeds, minibikes, motorscooters, and others) are included to provide driver-age distributions for these types of vehicles. A distribution by single and multi-vehicle accident involvement is also included.

One-third (33.3 percent) of all drivers involved in fatal accidents in 1983 were less than 25 years old. Almost half of the involved motorcycle drivers (48.2 percent) and about one-third of the drivers of involved passenger cars (36.2 percent) and light trucks (29.9 percent) were under 25. Almost one-quarter of the drivers of Mopeds and other motorized cycles (excluding motorcycles) were under 15. A majority of heavy truck and bus drivers involved in fatal accidents were 35 or older. Drivers 25 to 34 years old had about equal representation in single and multi-vehicle accidents: older drivers were in a larger share of multi-vehicle accidents while younger drivers were in a larger share of single vehicle accidents.

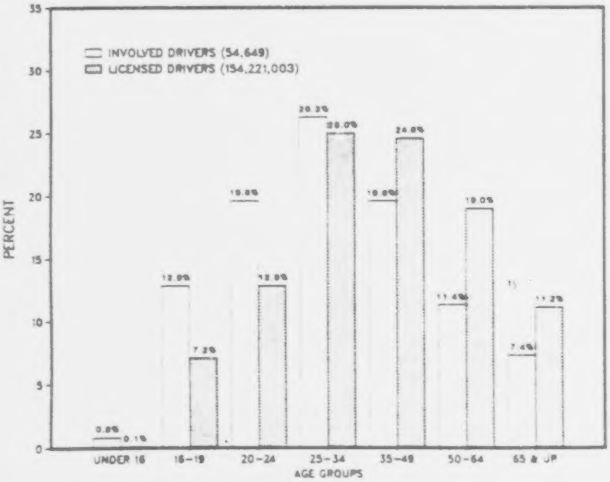
TABLE VII-1
DRIVERS INVOLVED IN FATAL ACCIDENTS BY VEHICLE TYPE, ACCIDENT TYPE AND AGE
(54,649)

	Under 15		15 to 17		18 to 20		21 to 24		25 to 34		35 to 44		45 to 54		55 to 64		Over 64	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Passenger Cars	44	0.1	2,030	6.1	4,617	14.0	5,284	16.0	8,025	24.3	4,315	13.1	2,762	8.4	2,446	7.4	3,239	9.8
Motorcycles	70	1.7	232	5.6	692	16.8	996	24.1	1,456	35.3	458	11.1	124	3.0	60	1.5	30	0.7
Other Motorized Cycles	38	23.9	28	17.6	19	11.9	10	6.3	20	12.6	9	5.7	8	5.0	7	4.4	19	11.9
Light Trucks	22	0.2	412	4.2	1,058	10.8	1,433	14.7	2,809	28.7	1,642	16.8	999	10.2	757	7.7	582	6.0
Medium Trucks			5	0.8	37	5.7	100	15.7	202	31.7	121	19.0	95	14.9	54	8.4	21	3.2
Heavy Trucks			5	0.1	66	1.6	340	8.3	1,356	33.0	1,117	27.2	790	19.2	369	9.0	41	1.0
Buses			1	0.3	5	1.6	11	3.6	79	26.0	98	32.2	58	19.1	44	14.5	8	2.6
Special Vehicles	26	1.8	114	7.7	187	12.6	218	14.4	423	28.0	250	16.5	117	7.7	100	6.6	68	4.6
Unknown	3	0.3	12	1.2	26	2.7	40	4.2	99	10.3	56	5.8	37	3.9	25	2.6	18	1.9
Total	**203**	**0.4**	**2,839**	**5.2**	**6,707**	**12.3**	**8,432**	**15.4**	**14,469**	**26.5**	**8,066**	**14.8**	**4,990**	**9.1**	**3,862**	**7.1**	**4,026**	**7.4**
Accident Type																		
Single Vehicle	80	0.3	1,409	6.1	3,314	14.5	3,958	17.3	6,086	26.6	3,059	13.3	1,739	7.6	1,294	5.6	1,171	5.1
Multi-Vehicle	123	0.4	1,430	4.5	3,393	10.7	4,474	14.1	8,383	26.4	5,007	15.8	3,251	10.2	2,568	8.1	2,855	9.0

Figure VII-3 compares drivers in fatal accidents with licensed drivers by age. Young drivers have far more fatal accidents per licensee than do older drivers.

As in previous years, Fridays and Saturdays proved to be the worst days for drivers to be on the road (36.9 percent of the 54,649 driver involvements in fatal accidents) and nighttime and early morning hours (4:00 p.m. to 12:00 a.m.) were the worst times (44.4 percent). Although the number of drivers in fatal accidents fell 2.5 percent in 1983, that reduction was not uniform throughout the week nor was it consistent during any 24-hour period (Table VII-2 and Table VII-3).

FIGURE VII-3
DRIVERS IN FATAL ACCIDENTS VERSUS LICENSED DRIVERS BY AGE



NOTE: 1055 INVOLVED DRIVERS WITH UNKNOWN AGE.

TABLE VII-2
DRIVERS IN FATAL ACCIDENTS BY AGE AND DAY OF WEEK
(54,649)

	Sunday		Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Under 15	34	16.7	26	12.8	28	13.8	30	14.8	18	8.9	27	13.3	40	19.7	203	100.0
15 to 17	453	16.0	287	10.1	278	9.8	276	9.7	324	11.4	566	19.9	655	23.1	2,839	100.0
18 to 20	1,192	17.8	688	10.3	664	9.9	705	10.5	775	11.6	1,084	16.2	1,598	23.8	6,707	100.0
21 to 24	1,451	17.2	840	10.0	887	10.5	883	10.5	1,037	12.3	1,354	16.1	1,980	23.5	8,432	100.0
25 to 34	2,224	15.4	1,570	10.9	1,661	11.5	1,708	11.8	1,930	13.3	2,465	17.0	2,910	20.1	14,469	100.0
35 to 44	1,054	13.1	929	11.5	1,024	12.7	1,087	13.5	1,096	13.6	1,362	16.9	1,513	18.8	8,066	100.0
45 to 54	618	12.4	620	12.4	638	12.8	688	13.8	749	15.0	853	17.1	824	16.5	4,990	100.0
55 to 64	474	12.3	484	12.5	530	13.7	528	13.7	608	15.7	624	16.2	613	15.9	3,862	100.0
Over 64	472	11.7	553	13.7	605	15.0	534	13.3	595	14.8	701	17.4	564	14.0	4,026	100.0
Unknown	202	19.2	104	9.9	89	8.4	109	10.4	115	10.9	164	15.6	270	25.6	1,055	100.0
Total	8,174	15.0	6,101	11.2	6,404	11.7	6,548	12.0	7,247	13.3	9,200	16.8	10,967	20.1	54,649	100.0

Note: 8 Drivers with unknown Day of Week are included in the Total Column.

Decreases that occurred on Sundays and Fridays (3.8 percent and 4.5 percent respectively), were offset by slight increases on Tuesdays and Thursdays (3.2 percent and .7 percent respectively). During the morning (8:00 a.m. to noon) and early evening hours (4:00 p.m. to 8:00 p.m.) driver involvement increased (4.9 percent and 2 percent respectively), while sizable decreases occurred from 8:00 p.m. to midnight (6.8 percent) and from midnight to 4:00 a.m. (8.8 percent).

When correlated with age, some revealing patterns emerge (Table VII-2). Fatal accident involvement is:

- Above average on Saturdays and Sundays for drivers under 35.
- Above average from Mondays through Thursdays for drivers over 35.
- Above average on Fridays for drivers 25-54.

Table VII-3 reveals still more interesting age-related patterns.

- Almost 60 percent of all fatal accidents that involved elderly drivers occurred between 8:00 a.m. and 4:00 p.m.
- The average age of drivers decreases as the time of fatal accidents gets later except:
  More than 70 percent of all fatal accidents that involve drivers under 15 occurred between noon and 8:00 p.m.

TABLE VII-3
DRIVERS IN FATAL ACCIDENTS BY AGE AND TIME OF DAY

	8am to Noon		Noon to 4pm		4pm to 8pm		8pm to 12am		12am to 4am		4am to 8am		Unknown		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Under 15	20	9.9	56	27.6	87	42.9	22	10.8	17	8.4	1	0.5			203	100.0
15 to 17	229	8.1	464	16.3	682	24.0	845	29.8	429	15.1	183	6.4	7	0.2	2,839	100.0
18 to 20	432	6.4	880	13.1	1,289	19.2	1,635	24.4	1,872	27.9	580	8.6	19	0.3	6,707	100.0
21 to 24	664	7.9	951	11.3	1,779	21.1	1,867	22.1	2,286	27.1	841	10.0	44	0.5	8,432	100.0
25 to 34	1,426	9.9	2,060	14.2	3,283	22.7	3,275	22.6	2,994	20.7	1,368	9.5	63	0.4	14,469	100.0
35 to 44	889	11.0	1,351	16.7	2,010	24.9	1,681	20.8	1,318	16.3	788	9.8	29	0.4	8,066	100.0
45 to 54	684	13.7	1,017	20.4	1,291	25.9	951	19.1	546	10.9	480	9.6	21	0.4	4,990	100.0
55 to 64	704	18.2	935	24.2	970	25.1	608	15.7	285	7.4	350	9.1	10	0.3	3,862	100.0
Over 64	1,042	25.9	1,312	32.6	1,008	25.0	339	8.4	101	2.5	208	5.2	16	0.4	4,026	100.0
Unknown	34	3.2	63	6.0	170	16.1	345	32.7	317	30.0	97	9.2	29	2.7	1,055	100.0
Total	**6,124**	**11.2**	**9,089**	**16.6**	**12,569**	**23.0**	**11,568**	**21.2**	**10,165**	**18.6**	**4,896**	**9.0**	**238**	**0.4**	**54,649**	**100.0**

The previous driving records of the 54,649 drivers involved in fatal accidents are shown in Table VII-4. This group excludes drivers who fled the scene, leaving their vehicles at the accident. In determining previous driving records FARS only counts those offenses that occurred in the three years prior to the 1983 fatal accident. Figure VII-4 shows the driving record of those 21,820 drivers who had at least one previous harmful moving violation, demonstrating the frequency of multiple convictions.

FIGURE VII-4
INVOLVED DRIVERS WITH AT LEAST ONE PREVIOUS OFFENSE

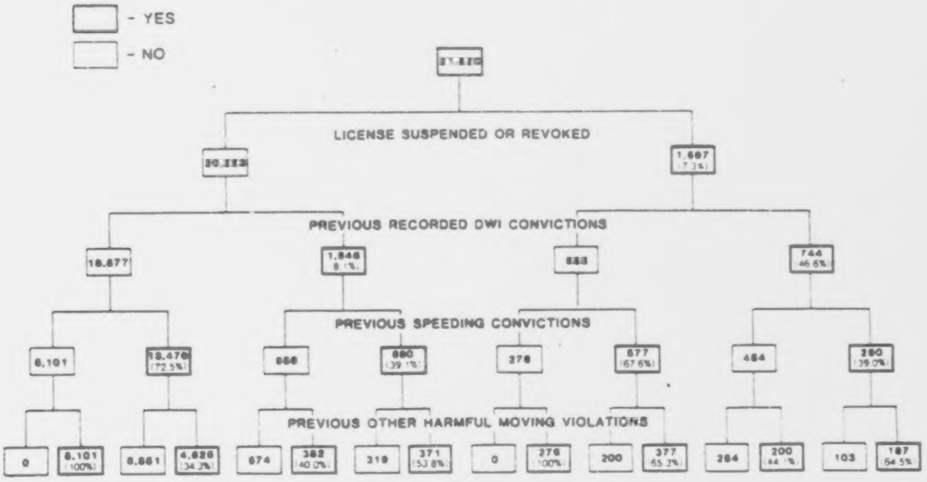

- YES
- NO
21,820
LICENSE SUSPENDED OR REVOKED
20,223
1,597 (7.3%)
PREVIOUS RECORDED DWI CONVICTIONS
18,577
1,646 (8.1%)
853
744 (46.6%)
PREVIOUS SPEEDING CONVICTIONS
5,101
13,476 (72.5%)
956
690 (41.9%)
276
577 (67.6%)
454
290 (39.0%)
PREVIOUS OTHER HARMFUL MOVING VIOLATIONS
0
5,101 (100%)
8,850
4,626 (34.3%)
574
382 (40.0%)
319
371 (53.8%)
0
276 (100%)
200
377 (65.3%)
254
200 (44.1%)
103
187 (64.5%)

Table VII-4 and Figure VII-4 also show driver license status. A driver was considered licensed if a valid license was held for the vehicle being operated, if no license was required, or if a learner's permit was held. A driver was considered unlicensed if no license was held when one was required, if the license held was not for the type of vehicle being operated, or if the license was suspended, revoked, or had expired.

Although most involved drivers had no previous recorded violations, this majority was lowest for speeding violations (68.1 percent). Also, in every category other than speeding convictions, a higher proportion of unlicensed drivers had multiple previous convictions recorded than did licensed drivers. The greatest number of previous multiple convictions were, in descending order, for speeding, other moving violations, and previous accidents, whereas among unlicensed drivers the descending order of previous multiple/convictions was for suspensions/revocations, other moving violations, and previous accidents. More unlicensed drivers had previous recorded convictions for driving while intoxicated (DWI) than did licensed drivers.

TABLE VII-4
DRIVERS IN FATAL ACCIDENTS BY TYPE AND BY NUMBER OF PREVIOUS VIOLATIONS
(54,649)

	None		One		Two		Three		Four		Five or More		Unknown		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Previous Accidents																
Invalid License	3,753	70.6	798	15.0	222	4.2	60	1.1	14	0.3	4	0.1	467	8.8	5,318	100.0
Valid License	38,924	82.0	6,651	14.0	1,377	2.9	319	0.7	70	0.1	41	0.1	68	0.1	47,450	100.0
Unknown	10	0.5	1	0.1									1,870	99.4	1,881	100.0
Total	**42,687**	**78.1**	**7,450**	**13.6**	**1,599**	**2.9**	**379**	**0.7**	**84**	**0.2**	**45**	**0.1**	**2,405**	**4.4**	**54,649**	**100.0**
Previous License Suspensions																
Invalid License	2,985	56.1	1,099	20.7	402	7.6	176	3.3	79	1.5	110	2.1	467	8.8	5,318	100.0
Valid License	44,418	93.6	2,134	4.5	519	1.1	172	0.4	78	0.2	61	0.2	68	0.1	47,450	100.0
Unknown	10	0.5	1	0.1									1,870	99.4	1,881	100.0
Total	**47,413**	**86.8**	**3,234**	**5.9**	**921**	**1.7**	**348**	**0.6**	**157**	**0.3**	**171**	**0.3**	**2,405**	**4.4**	**54,649**	**100.0**
Previous Driving While Intoxicated Violations																
Invalid License	3,954	74.4	663	12.5	167	3.1	48	0.9	12	0.2	7	0.1	467	8.8	5,318	100.0
Valid License	45,891	96.7	1,334	2.8	139	0.3	15	0.0	3	0.0			68	0.1	47,450	100.0
Unknown	10	0.5	1	0.1									1,870	99.4	1,881	100.0
Total	**49,855**	**91.2**	**1,998**	**3.7**	**306**	**0.6**	**63**	**0.1**	**15**	**0.0**	**7**	**0.0**	**2,405**	**4.4**	**54,649**	**100.0**
Previous Speeding Violations																
Invalid License	3,368	63.3	776	14.6	385	7.2	169	3.2	69	1.3	84	1.6	467	8.8	5,318	100.0
Valid License	33,835	71.3	8,391	17.7	3,071	6.5	1,179	2.5	517	1.1	389	0.8	68	0.1	47,450	100.0
Unknown	10	0.5			1	0.1							1,870	99.4	1,881	100.0
Total	**37,213**	**68.1**	**9,167**	**16.8**	**3,457**	**6.3**	**1,348**	**2.5**	**586**	**1.1**	**473**	**0.9**	**2,405**	**4.4**	**54,649**	**100.0**
Previous Other Moving Violations																
Invalid License	3,219	60.5	867	16.3	386	7.3	175	3.3	93	1.7	111	2.1	467	8.8	5,318	100.0
Valid License	37,499	79.0	6,945	14.6	1,904	4.0	621	1.3	232	0.5	181	0.4	68	0.1	47,450	100.0
Unknown	9	0.5	1	0.1	1	0.1							1,870	99.4	1,881	100.0
Total	**48,727**	**74.5**	**7,813**	**14.3**	**2,291**	**4.2**	**796**	**1.5**	**325**	**0.6**	**292**	**0.5**	**2,405**	**4.4**	**54,649**	**100.0**

MOTORCYCLE RIDERS

The largest number (61.3 percent) of motorcycle riders died in states without helmet use requirements (Table VII-5). More than 80 percent of all motorcyclists involved in fatal accidents were killed. Almost two-thirds (64.8 percent) of all fatally injured motorcyclists were not wearing helmets. In states that required helmet use, 39.3 percent of the fatally injured motorcyclists were not wearing helmets. In states that had no such law, 80.9 percent of fatally injured cyclists were not wearing a helmet. Because of the very high fatality rate of all motorcyclists involved in fatal accidents, no conclusions about the effectiveness of helmets should be drawn from FARS data.

The data in Table VII-5 do not attempt to relate the effectiveness of the mandatory helmet use laws on helmet usage or fatal injury reduction. FARS data do not include cases where the helmet may have saved the life of the rider. Other studies sponsored by NHTSA* have found that helmetless motorcycle riders receive injuries to the head or neck two to three times as often as do helmeted riders. These data are confirmed by the National Accident Sampling System (NASS).

TABLE VII-5
MOTORCYCLE HELMET USAGE

	States With Helmet Laws				States Without Helmet Laws			
	Involved		Fatalities		Involved		Fatalities	
	Number	%	Number	%	Number	%	Number	%
Drivers								
Wearing Helmet	985	48.8	855	53.8	504	16.3	444	17.7
Not Wearing Helmet	615	30.4	538	33.9	2,024	65.4	1,757	69.9
Passengers								
Wearing Helmet	219	10.8	107	6.7	76	2.5	36	1.4
Not Wearing Helmet	192	9.5	83	5.2	480	15.5	272	10.8
Unknowns								
Wearing Helmet	4	0.2	2	0.1				
Not Wearing Helmet	6	0.3	4	0.3	8	0.3	5	0.2
Total	**2,021**	**100.0**	**1,589**	**100.0**	**3,092**	**100.0**	**2,514**	**100.0**
Wearing Helmet	**1,208**	**59.8**	**964**	**60.0**	**580**	**18.8**	**480**	**19.1**
Not Wearing Helmet	**813**	**40.2**	**625**	**39.4**	**2,512**	**81.2**	**2,034**	**80.9**

Note: "Other Motorised Cycles" are not included in this table.

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*University of Southern California, 1980, Report No. DOT-HS-805-862.
University of Kansas, 1980, Report No. DOT-HS-805-773.
Department of Highways, State of Colorado, 1980, Report No. DOT-HS-805-627.
University of South Dakota, 1980, Report No. DOT-HS-805-619.

VIII. Non-Occupants

Nonoccupants constituted 7,744 of the traffic deaths in 1983--about one out of every five (18.2 percent) traffic fatalities. Of these, 88 percent (6,824) were pedestrians, and 10.8 percent (839) were pedalcyclists. The others include occupants of parked vehicles and people riding on animals or animal-drawn conveyances. Nonoccupant fatalities declined 6.7 percent from 1982, a decline substantially more than the 2.5 percent drop in occupant fatalities.

Most fatally injured nonoccupants (93 percent) were killed in single vehicle accidents. Most often they were hit by passenger cars (61.8 percent). About 20 percent were hit by light trucks and another 5.7 percent were hit by heavy trucks (Table VIII-1).

TABLE VIII-1
NONOCCUPANT FATALITIES BY STRIKING VEHICLE
(Single Vehicle Accidents Only)

	Number	Percent
Passenger Cars	4,442	61.8
Motorcycles	76	1.1
Other Motorized Cycles	2	0.0
Light Trucks	1,352	18.8
Medium Trucks	84	1.2
Heavy Trucks	409	5.7
Buses	117	1.6
Special Vehicles	119	1.7
Unknown	581	8.1
Total	**7,182**	**100.0**

Nonoccupants involved in fatal accidents had a much greater chance of death (89.6 percent) than did occupants (38.4 percent). Therefore, in many cases, the involvement of a nonoccupant contributed heavily to the accident being a fatal one. The age distributions of fatally injured occupants and nonoccupants are quite dissimilar (Table VIII-2). More than two-thirds (69.1 percent) of all involved occupants, whether killed or not, were between 15-44 years old, while fewer than half (45.4 percent) of the involved nonoccupants were between these ages. The same was true for those who were fatally injured. Two of every five fatally injured nonoccupants were either under 15 or over 64.

Almost twice as many pedestrians and about one-half more pedalcyclists were killed in urban areas as in rural areas (Figure VIII-1).

FIGURE VIII-1
NONOCCUPANT FATALITIES BY LAND USE
(7,744)

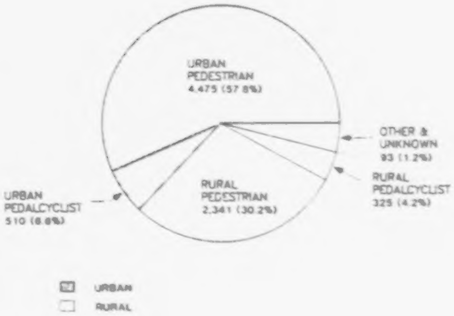


TABLE VIII-2
ALL OCCUPANTS AND NONOCCUPANTS BY AGE

	Occupants				Non-occupants				Total			
	Involved		Fatalities		Involved		Fatalities		Involved		Fatalities	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Under 15	7,021	7.7	1,590	4.6	1,673	19.4	1,496	19.3	8,694	8.8	3,086	7.2
15 to 17	7,260	8.0	2,395	6.9	435	5.0	353	4.6	7,695	7.7	2,748	6.4
18 to 20	11,954	13.2	4,674	13.4	586	6.8	492	6.4	12,540	12.6	5,166	12.1
21 to 24	13,012	14.4	5,357	15.4	772	8.9	663	8.6	13,784	13.9	6,020	14.1
25 to 34	19,797	21.8	7,984	22.9	1,334	15.4	1,171	15.1	21,131	21.4	9,155	21.5
35 to 44	10,601	11.7	4,058	11.6	805	9.3	719	9.3	11,406	11.5	4,777	11.2
45 to 54	6,697	7.4	2,634	7.6	678	7.8	626	8.1	7,375	7.4	3,260	7.6
55 to 64	5,421	6.0	2,415	6.9	736	8.5	690	8.9	6,157	6.2	3,105	7.3
Over 64	6,339	7.0	3,651	10.5	1,480	17.1	1,425	18.4	7,819	7.8	5,076	11.9
Unknown	2,561	2.8	82	0.2	142	1.6	109	1.4	2,703	2.7	191	0.4
Total	90,663	100.0	34,840	100.0	8,641	100.0	7,744	100.0	99,304	100.0	42,584	100.0

About 80 percent of the nonoccupant deaths occurred away from intersections. Most (71.4 percent) also were considered "on the roadway" when they were hit (Table VIII-3).

PEDESTRIANS

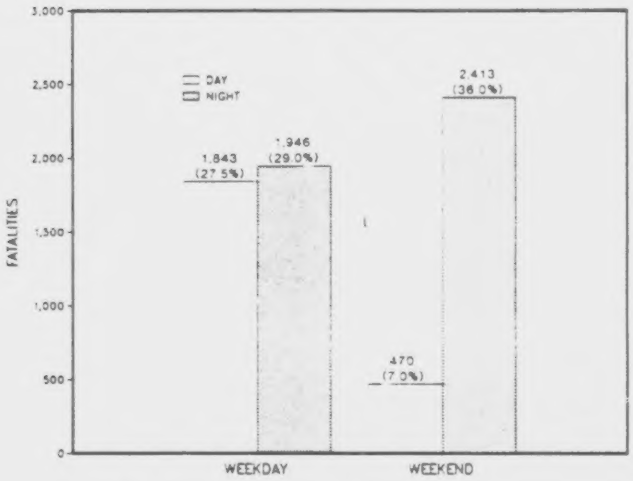
A total of 6,702 pedestrian accidents occurred in 1983, in which 6,824 pedestrians were killed.

More than half (56.5 percent) of all fatal pedestrian accidents occurred during the week, most often at night (Figure VIII-2).

TABLE VIII-3
NONOCCUPANT FATALITIES BY LAND USE.

	Urban	Rural	Unknown	Total
Intersection				
In Crosswalk	384	19		403
On Roadway	755	202		957
Other & Unknown	41	7	1	49
Non-Intersection				
In Crosswalk	31	14		45
On Roadway	3,388	2,131	9	5,528
Other & Unknown	399	292	1	692
Unknown	32	37	1	70
Total	5,030	2,702	12	7,744

FIGURE VIII-2
TIME OF DAY OF FATAL PEDESTRIAN ACCIDENTS
(6,702)



NOTE: 30 FATAL PEDESTRIAN ACCIDENTS UNKNOWN TIME

Pedestrians in all age groups were more frequently killed away from intersections than at intersections. However, for pedestrians over the age of 44 the rate of fatalities at intersections exceeds the rate for nonintersections (Table VIII-4).

Alcohol involvement in pedestrian deaths is discussed in Chapter 2.

PEDALCYCLISTS

A total of 839 pedalcyclists were killed in 1983. Although only 15.3 percent of all fatal accidents occurred on local streets, 25.7 percent of those involving a pedalcyclist were on such roadways (Figure VIII-3). More than half (55.4 percent) of the pedalcyclist deaths occurred during the hours between 6 a.m. and 6 p.m. (Figure VIII-4).

FIGURE VIII-3
FATAL ACCIDENTS INVOLVING PEDALCYCLISTS BY ROADWAY FUNCTION CLASS
(832)

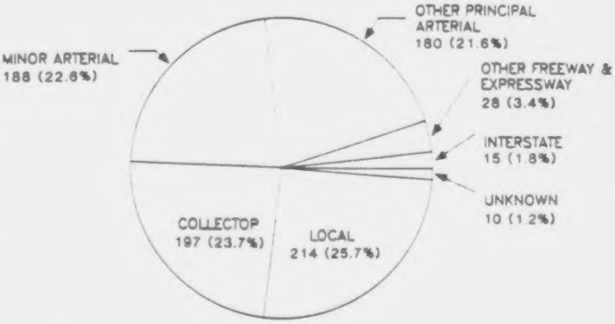


TABLE VIII-4
PEDESTRIAN FATALITIES BY AGE AND LOCATION

	Under 5	5 to 9	10 to 17	18 to 44	45 to 64	Over 64	Unknown	Total	Percent
Intersection									
In Crosswalk	11	16	17	66	89	184	4	387	5.7
On Roadway	23	52	61	225	168	218	17	764	11.2
Other & Unknown	1	1	4	20	6	14	1	47	0.7
Subtotal	**35**	**69**	**82**	**311**	**263**	**416**	**22**	**1,198**	**17.6**
Non-Intersection									
In Crosswalk	1	6	4	7	6	15		39	0.6
On Roadway	275	348	393	2,133	870	872	74	4,965	72.8
Other & Unknown	17	17	72	289	105	80	8	588	8.6
Subtotal	**293**	**371**	**469**	**2,429**	**981**	**967**	**82**	**5,592**	**82.0**
Unknown	4	1	3	18	4	4		34	0.4
Total	**332**	**441**	**554**	**2,758**	**1,248**	**1,387**	**104**	**6,824**	**100.0**
Percent	**4.8**	**6.5**	**8.1**	**40.5**	**18.3**	**20.3**	**1.5**	**100.0**	

.PA

Most (80 percent) of the preschool age pedalcyclists killed in traffic accidents were killed away from intersections. Only 24.7 percent of all pedalcyclist fatalities occurred at an intersection (Table VIII-5). However, the frequency of pedalcyclist fatalities at intersections was more prevalent for cyclists 5-17 and over 64.

FIGURE VIII-4
TIME OF DAY OF FATAL PEDALCYCLIST ACCIDENTS
(832)

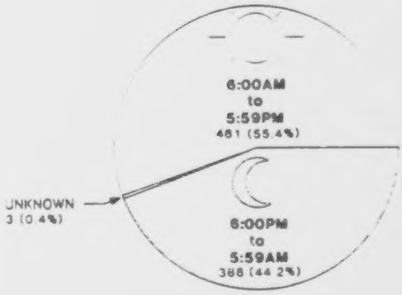


TABLE VIII-5
PEDALCYCLIST FATALITIES BY AGE AND LOCATION
(839)

	Under 5	5 to 9	10 to 17	18 to 44	45 to 64	Over 64	Unknown	Total	Percent
Intersection									
In Crosswalk		2	8	3	2			15	1.8
On Roadway	2	46	84	39	8	11		190	22.6
Other & Unknown	1		1					2	0.2
Subtotal	**3**	**48**	**93**	**42**	**10**	**11**		**207**	**24.6**
Non-Intersection									
In Crosswalk		3	3					6	0.7
On Roadway	12	86	209	171	39	20	4	541	64.5
Other & Unknown	3	2	16	30	2	3		56	6.7
Subtotal	**15**	**91**	**228**	**201**	**41**	**23**	**4**	**603**	**71.9**
Unknown	1	6	14	4	4			29	3.5
Total	**19**	**145**	**335**	**247**	**55**	**34**	**4**	**839**	**100.0**
Percent	**2.3**	**17.3**	**39.9**	**29.4**	**6.6**	**4.0**	**0.5**	**100.0**	

OTHER NON-OCCUPANTS

There were 81 "other nonoccupants" killed in 1983. These were nearly all occupants of vehicles not in transport, but they included people on horseback and occupants of animal-drawn conveyances. The largest segment (31.9 percent) of these accidents occurred on the Interstate System (Figure VIII-5).

FIGURE VIII-5
FATAL ACCIDENTS INVOLVING OTHER NONOCCUPANTS BY ROADWAY FUNCTION CLASS
(72)

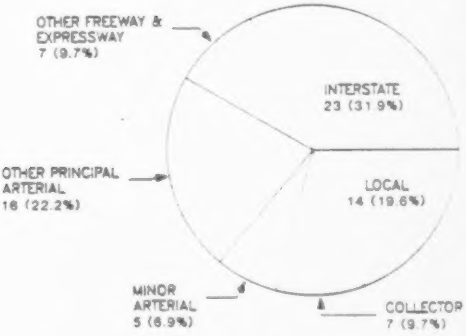


TABLE VIII-6
OTHER NONOCCUPANT FATALITIES BY AGE AND LOCATION
(81)

	Under 5	5 to 9	10 to 17	18 to 44	45 to 64	Over 64	Unknown	Total	Percent
Intersection									
In Crosswalk			1					1	1.2
On Roadway			1	2				3	3.7
Subtotal			2	2				4	4.9
Non-Intersection									
On Roadway	1	6	3	6	4	2		22	27.2
Other & Unknown	5		3	29	9	2		48	59.3
Subtotal	6	6	6	35	13	4		70	86.5
Unknown			3	3			1	7	8.6
Total	6	6	11	40	13	4	1	81	100.0
Percent	7.4	7.4	13.6	49.5	16.0	4.9	1.2	100.0	

IX. Selected Comparison 1975-1983

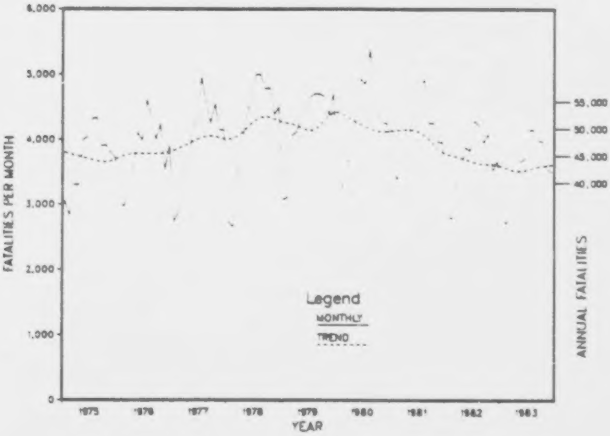
The number of traffic fatalities was less in 1983 than in any other calendar year since FARS began in 1975. For the third straight year there has been a decline in annual fatalities.

The decrease from 1982 to 1983 was only about a fourth of the 1981 to 1982 decrease, suggesting that the downward trend that began in 1981 may be leveling off.

Annual totals cannot show trends in the short term because they do not reveal what is happening during the year. Monthly totals, plotted as the solid curve in Figure IX-1, do give the within-year pattern but their large seasonal variations mask the trend. The trend curve, shown dashed in the figure, is a plot of the monthly data adjusted for seasonal effect and for the number of weekends in each month and further smoothed to remove random variation. The smoothing process used is described in the March-April 1984 issue of the NHTSA publication "Fatality Trends".

According to this trend curve the recent fatality decline ended near May 1983 and the trend was still headed upward at the end of that year. This provides a somewhat stronger indication than do the annual totals that the decline observed over the past few years has indeed ceased.

FIGURE IX-1
TOTAL MONTHLY TRAFFIC FATALITIES
AND TREND



X. Classifications

Accident, injury and fatality counts as coded in FARS may differ somewhat from those based on the standard definitions in the Manual on Classification of Motor Vehicle Traffic Accidents.* The standard was developed to establish uniformity in the classification and use of accident data. As such it applies to all accidents, whether or not they result in death. In part because FARS counts only fatal accidents (and only those where death occurs within 30 days of the accident), its counts are not always comparable to ANSI classification counts.

However, the following sections summarize 1983 FARS data as distributed among ANSI classifications where applicable. Paragraph numbers cited for each section are those used in the ANSI manual.

People by Injury Severity (ANSI 3.1)

In ANSI, five categories are used to classify accident-involved persons by the most severe injury sustained:

- No injury
- Possible injury
- Evident but non-incapacitating injury
- Incapacitating injury
- Fatal injury

The level of injury severity used is that which prevailed at the scene of the accident, with one significant exception--fatalities. Using ANSI manual criteria, injuries are considered fatal if they result in death anytime within 12 months of the accident. FARS uses instead the 30-day rule (see Chapter I) to conform with international counting systems. Expansion of the 30 day rule to 12 months results in a count of only 2 percent more fatalities and significantly sacrifices timeliness of reporting. Using the 12-month rule adopted by ANSI, full fatality counts would not be available until at least a full year after the end of the base year in which the counted accidents occurred.

Personal involvements in FARS-counted accidents in 1983 were distributed among the ANSI injury-severity classifications as follows:

o	No Injury	20,672
o	Possible Injury	5,195
o	Non-Incapacitating	13,089
o	Incapacitating	16,961
o	Fatal	42,584
o	Unknown Severity	168
o	Died prior to Accident	8
o	Unknown	627
o	**Total**	**99,304**

Vehicles by Damage Severity (ANSI 3.2)

Four categories are specified by ANSI to classify vehicle involvements in accidents by the most severe damage they receive:

- No damage
- Other damage
- Functional damage
- Disabling damage

These classifications usually are applied only to vehicles involved in non-injury accidents because injury to a person is considered more severe than property damage. Nevertheless, vehicle involvements in FARS-counted accidents are also coded according to ANSI damage classifications. In 1983, this resulted in the following distribution of involved vehicles:

o	No damage	1,937
o	Other damage	5,865
o	Functional damage	8,187
o	Disabling damage	37,859
o	Unknown	1,251
o	**Total**	**55,099**

Accidents by Injury Severity (ANSI 3.3)

Using ANSI groupings, accidents are classified according to the most severe personal injury sustained in them, as described in 3.1. Using this method of classification, all 37,971 accidents in FARS are, by definition, fatal.

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*__Manual On Classification of Motor Vehicle Traffic Accidents__, National Safety Council, Third Edition, Chicago. ANSI D16.1-1976 (revision of D16.1-1970) November, 1976.

Accidents by Damage Severity (ANSI 3.4)

Accidents are also classified according to the most severe vehicle damage sustained, as in 3.2 above. Using ANSI classifications, the 1983 accidents counted in FARS had the following distribution of most severe vehicle damage:

o	No damage	1,552
o	Other damage	3,645
o	Functional damage	4,258
o	Disabling damage	27,591
o	Unknown damage	925
o	Total	37,971

Accidents by Number of Involved Vehicles (ANSI 3.5)

Accidents can also be classified by the number of motor vehicles in transport which were involved. non-contact vehicles, such as those that forced another off the road but were not themselves involved in an impact, are not counted as accident-involved. FARS accidents in 1983 were classified as follows:

o	1 vehicle	23,045
o	2 vehicles	13,238
o	3 vehicles	1,371
o	4 vehicles	223
o	5 or more vehicles	94
o	**Total**	37,971

Accidents by First Harmful Event (ANSI 3.6)

The first harmful event that occurs in each accident, rather than the most harmful event, is specified in the ANSI manual as a classification for uniformity in accident statistics reporting. The categories are mutually exclusive. The frequency of 1983 FARS-counted accidents was distributed among first harmful events as follows:

o	Noncollision overturn	3,550
o	Other noncollision	648
o	Collision with pedestrian	6,431
o	Collision with motor vehicle in transport	14,099
o	Collision with parked vehicle	599
o	Collision with railway vehicle	403
o	Collision with pedalcycle	835
o	Collision with animal	88
o	Collision with fixed object	11,061
o	Collision with other object	242
o	Unknown	15
o	Total	37,971

Accidents by Location (ANSI 3.7)

Two mutually exclusive categories of accident location are specified in the ANSI manuals: on-roadway and off-roadway.

An on-roadway accident is (1) an event in which the initial point of contact between colliding units or between the colliding unit and a fixed or non-fixed object in the **first harmful event** is within that part of the trafficway designed, improved and ordinarily used for motor vehicle traffic or (2) a non-collision in which the vehicle involved was partly or entirely on the roadway at the time of the first harmful event. FARS accidents in 1983 occurred:

o	On-roadway	22,949
o	Off-roadway	14,973
o	Unknown	49
o	Total	37,971

Junction related locations include four mutually exclusive categories. Intersection-related accidents occur on approaches to or exits from intersections, interchanges and driveways as a result of activities, behavior or controls related to the movement of traffic through the intersection. Following are 1983 FARS data distributed among the four ANSI categories:

o	At intersection	8,358
o	Driveway access	1,277
o	Intersection-related	479
o	Non-junction	27,819
o	Unknown	38
o	Total	37,971

ANSI uses "class trafficway" to describe the administrative class of the roadway where an accident occurred. In 1983 FARS coding, class trafficway was replaced by "functional class". Class of trafficway is divided between two mutually exclusive categories:

o Fully controlled access highway
o Other

All Interstate highways and other freeways and expressways coded in FARS data are considered fully controlled.

o	Fully controlled	4,966
o	Other	32,910
o	Unknown	95
o	Total	37,971

Land Use is classified by ANSI as urban or rural, based on urban area boundaries approved by the Federal Highway Administration. Fatal accidents in 1983 were distributed as follows:

o	Urban	16,691
o	Rural	21,218
o	Unknown	62
o	Total	37,971

Accidents are also classified by governmental jurisdiction. County and city jurisdictions were coded in FARS but, in the interest of brevity, the resulting body of data is not included in this report, but are available from NHTSA.

Motor Vehicle Classifications (ANSI 3.8)

ANSI specifies eight mutually exclusive categories for classifying motor vehicles involved in accidents:

o Automobile
o Motorcycle
o Bus
o Light truck
o Single unit truck
o Truck tractor
o Truck combination
o Other motor vehicles

Categories used in FARS, although more detailed, are compatible with these ANSI specifications. Summarized according to ANSI definitions, the following vehicle involvements were counted in 1983 FARS accidents:

o	Automobile	33,288
o	Motorcycle	4,141
o	Bus	306
o	Light Truck	9,870
o	Other	7,640
o	Total	55,099

Glossary

Alcohol Involvement--An accident is considered to be alcohol involved if any of the following are true: (1) there was a positive blood alcohol test result on one of the involved drivers or nonoccupants, (2) the police investigation indicated that drinking was involved, whether there was a supporting alcohol test or not, or (3) if a driver was cited for Driving While Intoxicated or Driving Under the Influence of Liquor.

Automatic (Passive) Restraint System--Any restraint system that requires no action on the part of the driver or passengers to be effective in providing occupant crash protection, e.g., air bags or passive belts.

Body Type--Individual types of motor vehicles coded in the FARS file, as listed in Appendix B.

Buses--Unless otherwise noted, includes school buses, intercity buses, transit buses, and other large motor vehicles used to carry passengers.

Driver--An occupant of a vehicle who is in physical control of a motor vehicle in transport or, for an out-of-control vehicle, an occupant who was in control until control was lost.

Fatal Motor Vehicle Traffic Accident--An accident that involves a motor vehicle in transport on a trafficway and in which at least one person dies within 30 days of the accident.

First Harmful Event--The first event during an accident that caused injury or property damage.

Fixed Objects--Stationary structures or substantial vegetation attached to the terrain.

Gross Vehicle Weight (GVW)--The maximum rated capacity of a vehicle and includes the weight of the vehicle, all added equipment, driver and passengers, and load.

Heavy Truck--(1) single unit truck with GVW greater than 26,000 lbs., (2) tractor-trailer combination, (3) truck with cargo trailer(s), and (4) truck-tractor pulling no trailer. (See Appendix B.)

Initial Impact Point--The first impact point that produced personal injury or property damage.

Land Use--The accident location, i.e., urban or rural.

Light Truck--Pickups, vans, and truck based stationwagons. (see Appendix B.)

Manner of Collision--Accidents in which the first harmful event was a collision between two motor vehicles in transport and is described as one of the following:

Angle--Collisions which are not head-on, rear-end, rear-to-rear, or sideswipe.

Head-on--Refers to a collision where the front end of one vehicle collides with the front end of another vehicle while the two vehicles are traveling in opposite directions.

Rear-end--A collision between the rear of one vehicle and the front of another vehicle.

Manual (Active) Restraint System--Occupant restraints that require some action, usually buckling, before they are effective. They include shoulder belt, lap belt, lap and shoulder belt, infant carrier, or child safety seat.

Medium Truck--Any single unit truck with a GVW between 10,000 and 26,000 lbs., or unknown GVW. (See Appendix B.)

Moped--A motor-driven cycle capable of speeds up to approximately 30 miles an hour and which can also be pedaled.

Most Harmful Event--The event during an accident that is judged to have produced the greatest personal injury or property damage.

Motorcycle--A two- or three-wheeled motor vehicle designed to transport one or two people. For the purpose of this report, the following are not included unless otherwise noted: motorscooters, minibikes, and mopeds. (See Appendix B.)

Motor Vehicle in Transport--A motor vehicle which is in motion or on a roadway.

Noncollision--A class of accidents in which the first harmful event does not involve a collision with a fixed object or a nonfixed object. This includes overturn, fire/explosion, gas inhalation, falls from a vehicle and injuries in a vehicle.

Nonoccupant--Any person who is not an occupant of a motor vehicle in transport and includes: (1) pedestrians, (2) pedalcyclists, (3) occupants of parked motor vehicles, and (4) others such as joggers, skateboard riders, people riding on animals, and persons riding in animal-drawn conveyances.

Objects Not Fixed--Objects that are movable or moving but are not motor vehicles, pedestrians, pedalcyclists, animals, or trains (e.g., cargo in roadway).

Occupant--Any person who is in or upon a motor vehicle in transport and includes the driver, passengers, and persons riding on the exterior of a motor vehicle (e.g., a skateboard rider who is set in motion by holding on to a vehicle).

Passenger--Any occupant of a motor vehicle who is not a driver.

Passenger Car--Any of the following types of motor vehicles: (1) convertible; (2) 2-door sedan, hardtop or coupe; (3) 4-door sedan or hardtop; (4) 3 or 5 door hatchback coupe; (5) automobile with pickup body; (6) stationwagon; and (7) other small four-wheel motor vehicles used primarily for carrying passengers. Passenger car sizes are as follows:

	Wheelbase
Small Subcompact	Under 96"
Subcompact	96-101"
Compact	102-111"
Intermediate	112-120"
Full Size	Over 120"

Pedalcyclist--A person on a vehicle that is powered solely by pedals.

Pedestrian--Any person not in or upon a motor vehicle or other vehicle.

Principal Impact Point--The impact that is judged to have produced the greatest personal injury or property damage.

Roadway--That part of a trafficway used for motor vehicle travel.

Roadway Function Class--The classification describing the character of service the street or highway is intended to provide.

Interstate--limited access divided facility of at least four lanes designated by the Federal Highway Administration as part of the Interstate System.

Other Freeways and Expressways--All urban principal arterials with limited control of access not on the Interstate System.

Other Principal Arterial--Major streets or highways, many with multi-lane or freeway design, serving high volume traffic corridor movements that connect major generators of travel.

Minor Arterials--Streets and highways linking cities and larger towns in rural areas and distributing trips to small geographic areas in urban areas (not penetrating identifiable neighborhoods).

Collectors--In rural areas, routes serving intracounty, rather than statewide travel. In urban areas, streets providing direct access to neighborhoods as well as direct access to arterials.

Local Streets and Roads--Streets whose primary purpose is feeding higher order systems, providing direct access with little or no through traffic.

School Bus--A specific type of vehicle which, independent of ownership or design, is used to transport children to and from school, or to or from school activities.

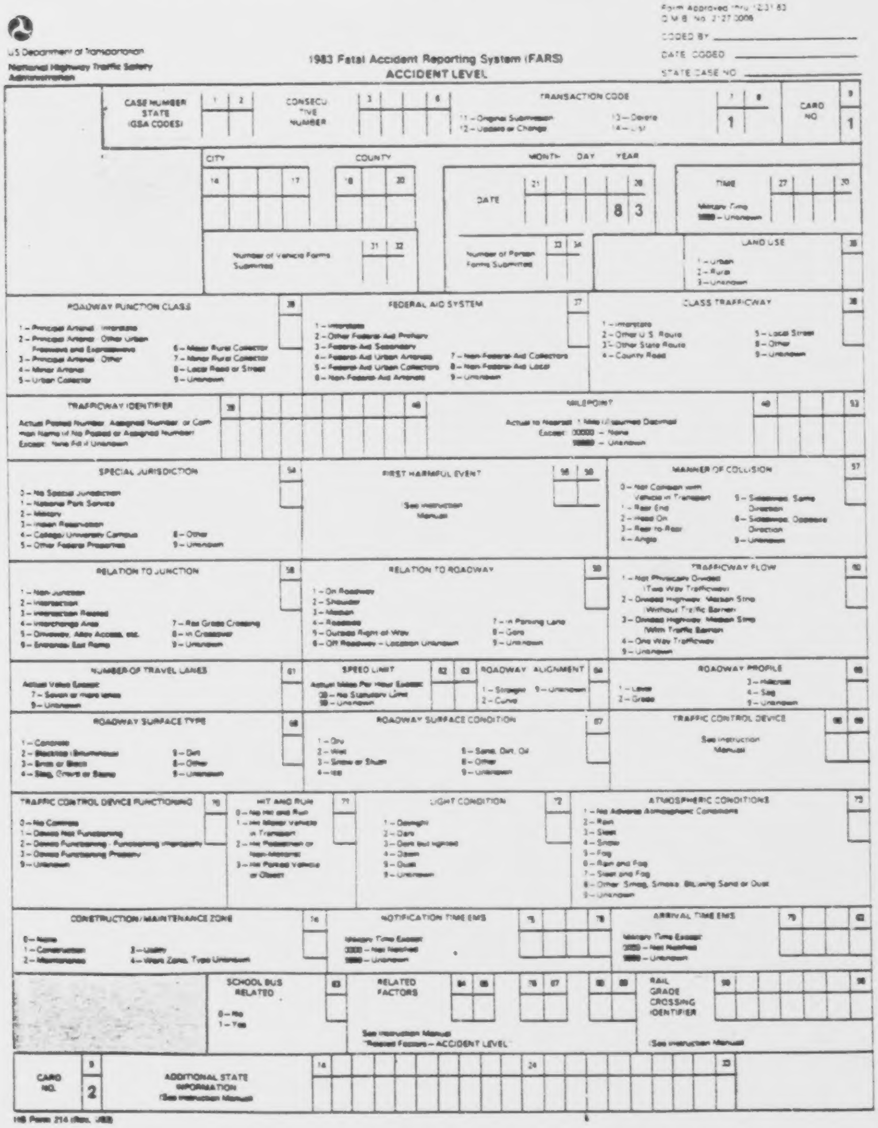
School Bus Related Accident--Any accident in which a vehicle, regardless of body design, used as a school bus is directly or indirectly involved, such as an accident involving school children alighting from a vehicle.

Special Vehicle--Consists of the following types of vehicles: (1) snowmobile; (2) farm equipment other than trucks; (3) dune buggy or swamp buggy; (4) construction equipment other than trucks; (5) ambulance; (6) large limousine; (7) self-propelled camper and motor home; (8) fire truck; (9) on/off road vehicle; and (10) other special vehicle.

Trafficway--Any road, street or highway open to the public as a matter of right or custom for moving persons or property from one place to another.

Vehicle Type--A series of motor vehicle body types that have been grouped together because of their design similarities. The principal vehicle types used in this report are passenger cars, motorcycles, pedalcycles, light trucks, medium trucks and heavy trucks, buses and special vehicles. See the definitions of each of the vehicle types elsewhere in this glossary.

Appendix A - 1983 Coding Forms



U.S. Department of Transportation
National Highway Traffic Safety Administration

1983 Fatal Accident Reporting System (FARS)
ACCIDENT LEVEL

Form Approved thru 12/31/83
O.M.B. No. 2127-0006
CODED BY ______
DATE CODED ______
STATE CASE NO ______

CASE NUMBER STATE (GSA CODES) 1 2
CONSECUTIVE NUMBER 3 6
TRANSACTION CODE 7 8: 1
11 – Original Submission
12 – Update or Change
13 – Delete
14 – List
CARD NO 9: 1

CITY 14 17
COUNTY 18 20
DATE (MONTH DAY YEAR) 21 26: 8 3
TIME 27 30
Military Time
9999 – Unknown

Number of Vehicle Forms Submitted 31 32
Number of Person Forms Submitted 33 34

LAND USE 35
1 – Urban
2 – Rural
9 – Unknown

ROADWAY FUNCTION CLASS 36
1 – Principal Arterial – Interstate
2 – Principal Arterial – Other Urban Freeways and Expressways
3 – Principal Arterial – Other
4 – Minor Arterial
5 – Urban Collector
6 – Major Rural Collector
7 – Minor Rural Collector
8 – Local Road or Street
9 – Unknown

FEDERAL AID SYSTEM 37
1 – Interstate
2 – Other Federal-Aid Primary
3 – Federal-Aid Secondary
4 – Federal-Aid Urban Arterials
5 – Federal-Aid Urban Collectors
6 – Non Federal-Aid Arterials
7 – Non-Federal-Aid Collectors
8 – Non-Federal-Aid Local
9 – Unknown

CLASS TRAFFICWAY 38
1 – Interstate
2 – Other U.S. Route
3 – Other State Route
4 – County Road
5 – Local Street
8 – Other
9 – Unknown

TRAFFICWAY IDENTIFIER 39 48
Actual Posted Number, Assigned Number, or Common Name if No Posted or Assigned Number
Except: Nine Fill if Unknown

MILEPOINT 49 53
Actual to Nearest .1 Mile (Assumed Decimal)
Except: 00000 – None
99999 – Unknown

SPECIAL JURISDICTION 54
0 – No Special Jurisdiction
1 – National Park Service
2 – Military
3 – Indian Reservation
4 – College/University Campus
5 – Other Federal Properties
8 – Other
9 – Unknown

FIRST HARMFUL EVENT 55 56
See Instruction Manual

MANNER OF COLLISION 57
0 – Not Collision with Vehicle in Transport
1 – Rear End
2 – Head On
3 – Rear to Rear
4 – Angle
5 – Sideswipe, Same Direction
6 – Sideswipe, Opposite Direction
9 – Unknown

RELATION TO JUNCTION 58
1 – Non-Junction
2 – Intersection
3 – Intersection Related
4 – Interchange Area
5 – Driveway, Alley Access, etc.
6 – Entrance/Exit Ramp
7 – Rail Grade Crossing
8 – In Crossover
9 – Unknown

RELATION TO ROADWAY 59
1 – On Roadway
2 – Shoulder
3 – Median
4 – Roadside
5 – Outside Right of Way
6 – Off Roadway – Location Unknown
7 – In Parking Lane
8 – Gore
9 – Unknown

TRAFFICWAY FLOW 60
1 – Not Physically Divided (Two Way Trafficway)
2 – Divided Highway, Median Strip (Without Traffic Barrier)
3 – Divided Highway, Median Strip (With Traffic Barrier)
4 – One Way Trafficway
9 – Unknown

NUMBER OF TRAVEL LANES 61
Actual Value Except:
7 – Seven or more lanes
9 – Unknown

SPEED LIMIT 62 63
Actual Miles Per Hour Except:
00 – No Statutory Limit
99 – Unknown

ROADWAY ALIGNMENT 64
1 – Straight
2 – Curve
9 – Unknown

ROADWAY PROFILE 65
1 – Level
2 – Grade
3 – Hillcrest
4 – Sag
9 – Unknown

ROADWAY SURFACE TYPE 66
1 – Concrete
2 – Blacktop (Bituminous)
3 – Brick or Block
4 – Slag, Gravel or Stone
5 – Dirt
8 – Other
9 – Unknown

ROADWAY SURFACE CONDITION 67
1 – Dry
2 – Wet
3 – Snow or Slush
4 – Ice
5 – Sand, Dirt, Oil
8 – Other
9 – Unknown

TRAFFIC CONTROL DEVICE 68 69
See Instruction Manual

TRAFFIC CONTROL DEVICE FUNCTIONING 70
0 – No Controls
1 – Device Not Functioning
2 – Device Functioning – Functioning Improperly
3 – Device Functioning Properly
9 – Unknown

HIT AND RUN 71
0 – No Hit and Run
1 – Hit Motor Vehicle in Transport
2 – Hit Pedestrian or Non-Motorist
3 – Hit Parked Vehicle or Object

LIGHT CONDITION 72
1 – Daylight
2 – Dark
3 – Dark but lighted
4 – Dawn
5 – Dusk
9 – Unknown

ATMOSPHERIC CONDITIONS 73
1 – No Adverse Atmospheric Conditions
2 – Rain
3 – Sleet
4 – Snow
5 – Fog
6 – Rain and Fog
7 – Sleet and Fog
8 – Other: Smog, Smoke, Blowing Sand or Dust
9 – Unknown

CONSTRUCTION/MAINTENANCE ZONE 74
0 – None
1 – Construction
2 – Maintenance
3 – Utility
4 – Work Zone, Type Unknown

NOTIFICATION TIME EMS 75 78
Military Time Except:
0000 – Not Notified
9999 – Unknown

ARRIVAL TIME EMS 79 82
Military Time Except:
0000 – Not Notified
9999 – Unknown

SCHOOL BUS RELATED 83
0 – No
1 – Yes

RELATED FACTORS 84 85 86 87 88 89
See Instruction Manual
"Related Factors – ACCIDENT LEVEL"

RAIL GRADE CROSSING IDENTIFIER 90 96
(See Instruction Manual)

CARD NO. 9: 2
ADDITIONAL STATE INFORMATION (See Instruction Manual) 14 24 33

HS Form 214 (Rev. 1/83)

U.S. Department of Transportation
National Highway Traffic Safety Administration

1983 Fatal Accident Reporting System (FARS)
PERSON LEVEL

Form Approved thru 12/31/83
O.M.B. No. 2127-0008

CODED BY: ____________________

DATE CODED: ____________________

STATE CASE NO: ____________________

CASE NUMBER STATE (GSA CODES) 1 2 ☐☐

CONSECUTIVE NUMBER 3 4 5 6 ☐☐☐☐

TRANSACTION CODE 7 8 3 ☐
31 – Original Submission
32 – Update or Change

CARD NO 9 1

VEHICLE NUMBER (Assigned by Analyst) 10 11 ☐☐
00 – Non-Motorist

PERSON NUMBER 12 13 ☐☐
(Assigned by Analyst)

NON-MOTORIST STRIKING VEHICLE NUMBER 14 15 ☐☐
Assigned Vehicle Number
Except
99 – Unknown

AGE 16 17 ☐☐
Actual Value
00 – Up to One Year
97 – Ninety-Seven Years or Older
99 – Unknown

SEX 18 ☐
1 – Male
2 – Female
9 – Unknown

PERSON TYPE 19 ☐
1 – Driver of a Motor Vehicle in Transport
2 – Passenger of a Motor Vehicle in Transport

3 – Occupant of a Motor Vehicle Not in Transport
4 – Occupant of a Non-Motor Vehicle Transport Device

5 – Non-Occupant – Pedestrian
6 – Non-Occupant – Bicyclist
7 – Non-Occupant – Other Cyclist
8 – Non-Occupant – Other or Unknown

9 – Unknown Occupant Type in a Motor Vehicle in Transport

SEATING POSITION 20 21 ☐☐
00 – Non-Motorist
11 – Front Seat – Left Side (Driver's Side)
12 – – Middle
13 – – Right Side
18 – – Other
19 – – Unknown
21 – Second Seat – Left Side
22 – – Middle
23 – – Right Side
28 – – Other
29 – – Unknown
31 – Third Seat – Left Side
32 – – Middle
33 – – Right Side
38 – – Other
39 – – Unknown
41 – Fourth Seat – Left Side
42 – – Middle
43 – – Right Side
48 – – Other
49 – – Unknown
50 – Sleeper Section of Cab (Truck)
51 – Other Passenger in Enclosed Passenger or Cargo Area
52 – Other Passenger in Unenclosed Passenger or Cargo Area
53 – Other Passenger in Passenger or Cargo Area, Unknown Whether or Not Enclosed
54 – Trailing Unit
55 – Riding on Vehicle Exterior
99 – Unknown

MANUAL (ACTIVE) RESTRAINT SYSTEM – USE 22 ☐
0 – None Used (Vehicle Occupant) Not Applicable (Non-Motorist)
1 – Shoulder Belt
2 – Lap Belt
3 – Lap and Shoulder Belt
4 – Child Safety Seat
5 – Motorcycle Helmet
8 – Restraint Used – Type Unknown or Other including Other Helmet
9 – Unknown

AUTOMATIC (PASSIVE) RESTRAINT SYSTEM – FUNCTION 23 ☐
0 – Not Equipped or Non-Motorist
1 – Automatic Belt in Use
2 – Automatic Belt Not in Use
3 – Deployed Air Bag
4 – Non-deployed Air Bag
9 – Unknown

NON MOTORIST LOCATION 24 25 ☐☐
00 – Not Applicable – Vehicle Occupant
01 – Intersection – In Crosswalk
02 – Intersection – On Roadway, Not in Crosswalk
03 – Intersection – On Roadway, Crosswalk Not Available
04 – Intersection – On Roadway, Crosswalk Availability Unknown
08 – Intersection – Not on Roadway
09 – Intersection – Unknown
10 – Non-Intersection – In Crosswalk
11 – Non-Intersection – On Roadway, Not in Crosswalk
12 – Non-Intersection – On Roadway, Crosswalk Not Available
13 – Non-Intersection – On Roadway, Crosswalk Availability Unknown
14 – Non-Intersection – In Parking Lane
15 – Non-Intersection – On Road Shoulder
16 – Non-Intersection – Bike Path
17 – Non-Intersection – Outside Trafficway
18 – Non-Intersection – Other, Not on Roadway
19 – Non-Intersection – Unknown
99 – Unknown

EJECTION 26 ☐
0 – Not Ejected
1 – Totally Ejected
2 – Partially Ejected
9 – Unknown

EXTRICATION 27 ☐
0 – Not Extricated
1 – Extricated
9 – Unknown

POLICE REPORTED ALCOHOL INVOLVEMENT 28 ☐
0 – No (Alcohol Not Involved)
1 – Yes (Alcohol Involved)
8 – Not Reported
9 – Unknown (Police Reported)

ALCOHOL TEST RESULT 29 30 ☐☐
Actual Value (Decimal Implied before First Digit) (0.xx)
95 – Test Refused
96 – None Given
97 – AC Test Performed, Results Unknown
99 – Unknown

INJURY SEVERITY 31 ☐
0 – No Injury (O)
1 – Possible Injury (C)
2 – Nonincapacitating Evident Injury (B)
3 – Incapacitating Injury (A)
4 – Fatal Injury (K)
5 – Injured, Severity Unknown
6 – Died Prior to Accident
9 – Unknown

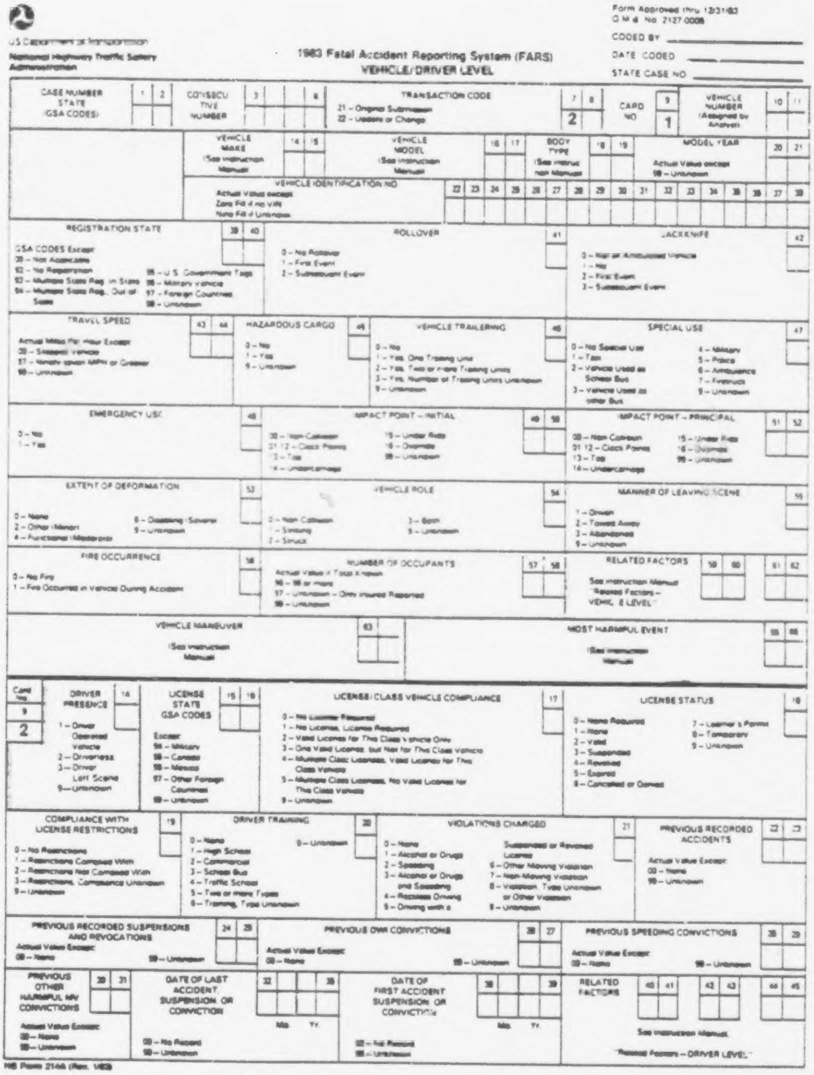
TAKEN TO HOSPITAL OR TREATMENT FACILITY 32 ☐
0 – No
1 – Yes
9 – Unknown

DEATH DATE 33 … 38 ☐☐☐☐☐☐
000000 – Not Applicable
999999 – Unknown
MONTH DAY YEAR

DEATH TIME 39 … 42 ☐☐☐☐
Military Time Except
2500 – Not Applicable
9999 – Unknown

RELATED FACTORS 43 44 ☐☐ 45 46 ☐☐ 47 48 ☐☐
See Instruction Manual
"Related Factors – PERSON LEVEL"

HS Form 214B (Rev. 1/83)



U.S. Department of Transportation
National Highway Traffic Safety Administration

Form Approved thru 12/31/83
O.M.B. No. 2127-0006

CODED BY ______
DATE CODED ______
STATE CASE NO ______

1983 Fatal Accident Reporting System (FARS)
VEHICLE/DRIVER LEVEL

CASE NUMBER STATE (GSA CODES) — 1, 2

CONSECUTIVE NUMBER — 3–6

TRANSACTION CODE — 7, 8: 2
21 – Original Submission
22 – Update or Change

CARD NO — 9: 1

VEHICLE NUMBER (Assigned by Analyst) — 10, 11

VEHICLE MAKE (See Instruction Manual) — 14, 15

VEHICLE MODEL (See Instruction Manual) — 16, 17

BODY TYPE (See Instruction Manual) — 18, 19

MODEL YEAR — 20, 21
Actual Value except
99 – Unknown

VEHICLE IDENTIFICATION NO — 22–38
Actual Value except
Zero Fill if no VIN
Nine Fill if Unknown

REGISTRATION STATE — 39, 40
GSA CODES Except
00 – Not Applicable
92 – No Registration
93 – Multiple State Reg. in State
94 – Multiple State Reg., Out of State
95 – U.S. Government Tags
96 – Military Vehicle
97 – Foreign Countries
99 – Unknown

ROLLOVER — 41
0 – No Rollover
1 – First Event
2 – Subsequent Event

JACKKNIFE — 42
0 – Not an Articulated Vehicle
1 – No
2 – First Event
3 – Subsequent Event

TRAVEL SPEED — 43, 44
Actual Miles Per Hour Except
00 – Stopped Vehicle
97 – Ninety-seven MPH or Greater
99 – Unknown

HAZARDOUS CARGO — 45
0 – No
1 – Yes
9 – Unknown

VEHICLE TRAILERING — 46
0 – No
1 – Yes, One Trailing Unit
2 – Yes, Two or more Trailing Units
3 – Yes, Number of Trailing Units Unknown
9 – Unknown

SPECIAL USE — 47
0 – No Special Use
1 – Taxi
2 – Vehicle Used as School Bus
3 – Vehicle Used as other Bus
4 – Military
5 – Police
6 – Ambulance
7 – Firetruck
9 – Unknown

EMERGENCY USE — 48
0 – No
1 – Yes

IMPACT POINT – INITIAL — 49, 50
00 – Non-Collision
01-12 – Clock Points
13 – Top
14 – Undercarriage
15 – Under Ride
16 – Override
99 – Unknown

IMPACT POINT – PRINCIPAL — 51, 52
00 – Non-Collision
01-12 – Clock Points
13 – Top
14 – Undercarriage
15 – Under Ride
16 – Override
99 – Unknown

EXTENT OF DEFORMATION — 53
0 – None
2 – Other (Minor)
4 – Functional (Moderate)
6 – Disabling (Severe)
9 – Unknown

VEHICLE ROLE — 54
0 – Non-Collision
1 – Striking
2 – Struck
3 – Both
9 – Unknown

MANNER OF LEAVING SCENE — 55
1 – Driven
2 – Towed Away
3 – Abandoned
9 – Unknown

FIRE OCCURRENCE — 56
0 – No Fire
1 – Fire Occurred in Vehicle During Accident

NUMBER OF OCCUPANTS — 57, 58
Actual Value if Total Known
96 – 96 or more
97 – Unknown – Only Injured Reported
99 – Unknown

RELATED FACTORS — 59, 60, 61, 62
See Instruction Manual
"Related Factors – VEHICLE LEVEL"

VEHICLE MANEUVER — 63
(See Instruction Manual)

MOST HARMFUL EVENT — 65, 66
(See Instruction Manual)

Card No. — 9: 2

DRIVER PRESENCE — 14
1 – Driver Operated Vehicle
2 – Driverless
3 – Driver Left Scene
9 – Unknown

LICENSE STATE GSA CODES — 15, 16
Except
94 – Military
95 – Canada
96 – Mexico
97 – Other Foreign Countries
99 – Unknown

LICENSE/CLASS VEHICLE COMPLIANCE — 17
0 – No License Required
1 – No License, License Required
2 – Valid License for This Class Vehicle Only
3 – One Valid License, but Not for This Class Vehicle
4 – Multiple Class Licenses, Valid License for This Class Vehicle
5 – Multiple Class Licenses, No Valid License for This Class Vehicle
9 – Unknown

LICENSE STATUS — 18
0 – None Required
1 – None
2 – Valid
3 – Suspended
4 – Revoked
5 – Expired
6 – Cancelled or Denied
7 – Learner's Permit
8 – Temporary
9 – Unknown

COMPLIANCE WITH LICENSE RESTRICTIONS — 19
0 – No Restrictions
1 – Restrictions Complied With
2 – Restrictions Not Complied With
3 – Restrictions, Compliance Unknown
9 – Unknown

DRIVER TRAINING — 20
0 – None
1 – High School
2 – Commercial
3 – School Bus
4 – Traffic School
5 – Two or more Types
6 – Training, Type Unknown
9 – Unknown

VIOLATIONS CHARGED — 21
0 – None
1 – Alcohol or Drugs
2 – Speeding
3 – Alcohol or Drugs and Speeding
4 – Reckless Driving
5 – Driving with a Suspended or Revoked License
6 – Other Moving Violation
7 – Non-Moving Violation
8 – Violation, Type Unknown or Other Violation
9 – Unknown

PREVIOUS RECORDED ACCIDENTS — 22, 23
Actual Value Except:
00 – None
99 – Unknown

PREVIOUS RECORDED SUSPENSIONS AND REVOCATIONS — 24, 25
Actual Value Except:
00 – None
99 – Unknown

PREVIOUS DWI CONVICTIONS — 26, 27
Actual Value Except:
00 – None
99 – Unknown

PREVIOUS SPEEDING CONVICTIONS — 28, 29
Actual Value Except:
00 – None
99 – Unknown

PREVIOUS OTHER HARMFUL MV CONVICTIONS — 30, 31
Actual Value Except:
00 – None
99 – Unknown

DATE OF LAST ACCIDENT, SUSPENSION, OR CONVICTION — 32–35
Mo. Yr.
00 – No Record
99 – Unknown

DATE OF FIRST ACCIDENT, SUSPENSION, OR CONVICTION — 36–39
Mo. Yr.
00 – No Record
99 – Unknown

RELATED FACTORS — 40, 41; 42, 43; 44, 45
See Instruction Manual
"Related Factors – DRIVER LEVEL."

HS Form 214A (Rev. 1/83)

Appendix B

ORDER FORM FOR NHTSA TAPES / DOCUMENTATION

The U S Department of Transportation, Transportation Systems Center (DOT/TSC) has the following NHTSA data tapes, and/or, tape documentation available as specified below Mark the appropriate blocks with an ("X") to indicate item(s) desired Years required should be indicated by circling those dates

I. AVAILABLE DATA TAPES* ($150.00 per tape, per year)

- ☐ **Fatal Accident Reporting System (FARS)**
  - o Sequential Version - 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983
  - o SAS Version - 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983
- ☐ **National Accident Sampling System (NASS)**
  - o Sequential Version - 1979, 1980, 1981, 1982
  - o SAS Version - 1979, 1980, 1981, 1982
- ☐ **National Crash Severity Study (NCSS)** - Sequential Versions only
  - o Pre-April (Augmented) - Jan. 1977 - Mar. 1978
  - o Post-April - Apr. 1978 - Mar. 1979
- ☐ **Pedestrian Injury Causation Study (PICS)**
  - o 1 Tape - SAS Version only

*Data tapes are available in ASCII or EBCDIC Code and tape density of 1600 or 6250 BPI Please specify characteristics desired by circling Documentation will be provided with each tape purchased

II. AVAILABLE DOCUMENTATION

- ☐ **Fatal Accident Reporting System**
  - o 1975 - 1981, 1 document, @ $15.00
  - o 1982, 1983, 1 document, @ $15.00
- ☐ **National Accident Sampling System** @ $5.00 each year
  - o 1979, 1980, 1981, 1982
- ☐ **National Crash Severity Study**
  - o 1 document, @ $5.00
- ☐ **Pedestrian Injury Causation Study**
  - o 1 document, @ $5.00

****TOTAL AMOUNT: $___________**

**NOTE Some Federal and State Offices along with their supporting contractors may not be subject to these charges To clarify please call Jane Wiley at NHTSA (202) 426-4844

Please enclose a check or money order for the correct amount, made payable to DOT / Transportation Systems Center Mail to

John F Mitchell, DTS-32
DOT / Transportation Systems Center
Kendall Square
Cambridge, MA 02142

Please send tapes and/or documentation to

Company ______________________________
Attention ______________________________
Address ______________________________
City ______________ State ____ Zip ______
Please include person to contact and telephone number
____

Shipment will be made by regular mail unless otherwise specified If you wish to have it sent by other means, please include company and account number ______________
____

Appendix C
Cross Reference for Previous FARS Reports

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